

DO NOT
REMOVE FROM LOBBY.

THE NATIONAL *Provisioner*

OCTOBER 18, 1952

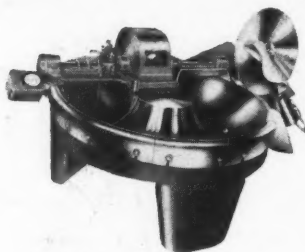
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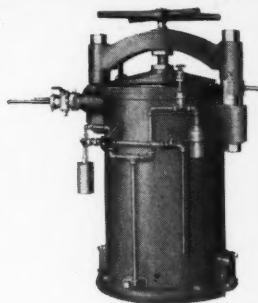
• Proceedings of the 47th Annual Meeting
of the American Meat Institute



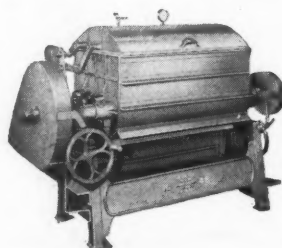
INVITATION TO EFFICIENCY at every step in sausage making



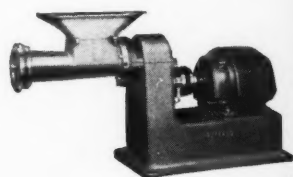
SILENT CUTTERS — Capacities from 20 to 800 pounds. Special analysis steel blades give clean, cool cutting action. Has self-emptying time-saver feature.



STUFFERS — Capacities from 60 to 1,000 pounds. Special leak-proof design . . . air and meat can't get past piston. Stainless valves and tubes.



VACUUM MIXERS — Capacities (also standard models) from 75 to 2,000 pounds. Stainless paddles, shafts, tubs and end plates optional.



GRINDERS — Capacities from 1,000 to 15,000 pounds per hour. Machined feed screw and finely finished rifled cylinder assure clean, cool cutting.

Buffalo QUALITY SAUSAGE MACHINERY

for more than 80 years

No matter how big or how small your plant may be, there is a complete line of Buffalo quality sausage-making machinery to fit your individual needs. Space and cost are saved by buying from the line with the widest range of sizes, the most complete assortment of models. "Buffalo" offers both.

John E. Smith's Sons Co.

50 BROADWAY BUFFALO 3, N. Y.

Sales and Service Offices in Principal Cities

THIS STAMP CARRIES A QUALITY MESSAGE

Leaders in presenting features that increase efficiency and safeguard quality. Dependable performance with maximum safety and sanitation. A complete line to suit every requirement. Service from coast to coast by factory-trained experts.



ASK FOR OUR LATEST CATALOGS

JOHN E. SMITH'S SONS CO., 50 Broadway, Buffalo 3, N. Y.

I am interested in the following:

- | | |
|---|---|
| <input type="checkbox"/> Silent Cutter | <input type="checkbox"/> Head Cheese Cutter |
| <input type="checkbox"/> Grinder | <input type="checkbox"/> Casing Applier |
| <input type="checkbox"/> Mixer | <input type="checkbox"/> Pork Fat Cuber |
| <input type="checkbox"/> Stuffer | <input type="checkbox"/> Smoke Master |
| <input type="checkbox"/> Combination of Special Purpose Equipment | |

Name _____
Company _____
Address _____
City and State _____

Give Your Sausage
Its Own

Distinctive
Flavor...



with CUSTOM "Individualized" CURES!

For unsurpassed sausage quality and that extra "something" that makes customers call for your sausage again and again, you'll want to see your CUSTOM Field Man. He's the man with the skill . . . the experience . . . and the CUSTOM specially formulated cures that can give your brand of sausage real *taste-identity*.

Spend just a short while with your CUSTOM Field Man and you will convince yourself that a CUSTOM Cure, especially formulated for your use, will make your sausage stand out above all the rest — in flavor, appearance, and downright goodness. Just remember that CUSTOM can supply the taste your customers want—and do it with sure-fire uniformity. Thus, when you have established taste preference among your customers, you can fill that preference consistently.

Remember, too, that your formula is *yours alone*. Once it has been compounded for you it is carefully recorded in CUSTOM'S files. Then, when you call for *your* formula, you get exactly the right ingredients mixed in exactly the right proportions. And you won't find better quality anywhere.

Call your CUSTOM Field Man today. He carries data on special formulas right with him. You'll find him helpful and friendly, ready to work with you at all times. Often, his advice can save you money and help solve your production problems. There's no obligation on your part, of course.



Custom

FOOD PRODUCTS INC.

Manufacturers of Quality Foods and Food Ingredients

Only YOU can pick the **RIGHT** temperature control

Try this check test

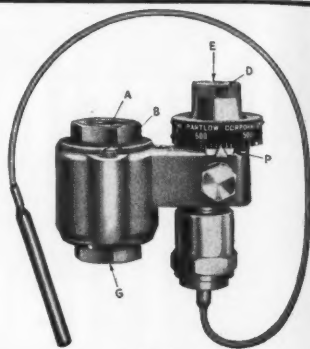
with your own meat processing problems in mind



Model M

Is your fuel **GAS**? Can the control be near the burners?..... ☐

Then you will probably want a self-contained mechanical control, like the Model 40. It throttles with the closest sensitivity, needs no maintenance, and requires no accessories at all. And it's built for life.



Model 40

Must you **SEE** the actual process temperature at all times?..... ☐

If so, use a big Partlow Dial Thermometer along with the Model 40. You'll be able to check temperatures in the smokehouse from the rack-loading station; or to detect variations in the paraffin heat from the packing line.

Do you want **CONTROL** and **INDICATION** in one instrument?..... ☐

Here's where you shift from mechanical to electrical controls, operating solenoid or motor valves in the steam or gas lines. The Model M is popular and compact. The Models LW,

LY and LB have extra-long scales for distance reading. Reverse switching to adapt such instruments to refrigeration work is simple. Partlow units reach down to minus 30 F.

Is **REFRIGERATION** the reason you need better temperature control?... ☐

Three of Partlow's standard instrument ranges reach down below the chill-room zone. One goes down far enough for fast-freeze work. The low cost of Partlow instrumentation permits

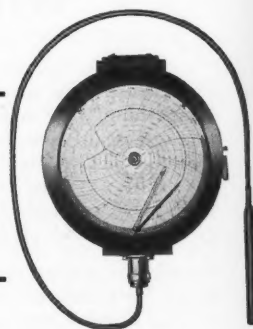
a separate indicating control for every room or zone—a big factor in the large packing house. Some Partlow units ride with refrigerated cars or truck trailers.



Model BBZ

Need a **PERMANENT RECORD** on each production batch?..... ☐

Then specify a recording instrument like the Model A—with or without cams to regulate heating schedules on a program basis. Inked charts give you evidence you can keep to check against product quality.



Model A

Want **ALARM** or **LIMIT CONTROL** to protect you from overshoot?..... ☐

No need to spoil goods with Partlow controls, even if the smokehouse operator goes to sleep. Two-point controls, like the Model BBZ, give

you an extra independent circuit to ring bells, flash signals or shut off heat if trouble threatens.

Is **RELATIVE HUMIDITY** in your smokehouse important?..... ☐

Partlow even has a control for this—the model AH—a control with dual elements and dual mechanisms. One senses and records wet-bulb temperature while the other handles dry-bulb

temperature—both conspiring to hold just the right amount of moisture in the meat under heat. And in this era of processed meat, better control means better business.

Controls for: **SMOKEHOUSES** **STERILIZING EQUIPMENT** **DEPILATING TANKS**
SCALDING & DEHAIRING MACHINERY **WATER HEATING** **REFRIGERATED SPACES**

THE PARTLOW CORPORATION

3 CAMPION ROAD

NEW HARTFORD, NEW YORK

THE NATIONAL PROVISIONER, Vol. 127, No. 16. Published weekly at 15 West Huron St., Chicago 10, Ill., U.S.A., by The National Provisioner, Inc. Yearly subscriptions: U.S., \$4.50; Canada, \$6.50; Foreign countries, \$6.50. Single copies, 25 cents. Copyright 1952 by The National Provisioner, Inc. Trade Mark registered in U.S. Patent Office. Entered as second-class matter October 9, 1919, at the Post Office at Chicago, Ill., under the act of March 3, 1879.

added safety

for

NEW BOSS STUFFERS

Added safety features now available in Boss Stuffers create a bonus value of real and lasting importance. The new, extra safe Boss Stuffers cannot be opened while the piston is subjected to pressure, and cannot be closed while fingers are ex-

posed. Think for a moment what these safety features could save you in the uncertain months ahead.

Detailed information about the new Boss Stuffers will be sent promptly upon request.

OTHER PROFIT MAKING FEATURES

BOSS STUFFERS

are built for capacities of 100 to 600 lbs.

On 400-500-600 pound sizes, lid and yoke swing on ball bearings for ease of opening and closing.

Lid is centered automatically when yoke is swung to "closed" position.

Rubber packed, semi-steel lid fits flush into safety ring for complete emptying of cylinder.

Yoke is electrically refined cast steel, and is equipped with spring actuated centering pin for perfect lid alignment.

Coarse pitch, double lead screw for rapid operation of lid.

Cylinder of heavy nickel bearing semi-steel is machined and polished inside for efficiency and cleanliness.

Flat top, floating piston has air tight packing. Piston and packing easily adjusted without removal of piston from cylinder. Piston fits flush against lid and safety ring for complete ejection of meat.

Right or left air intake (except 100 lbs. size which has one air intake only).

Globe valve and syphon create vacuum beneath piston for quick return.

Silencer for air exhaust.

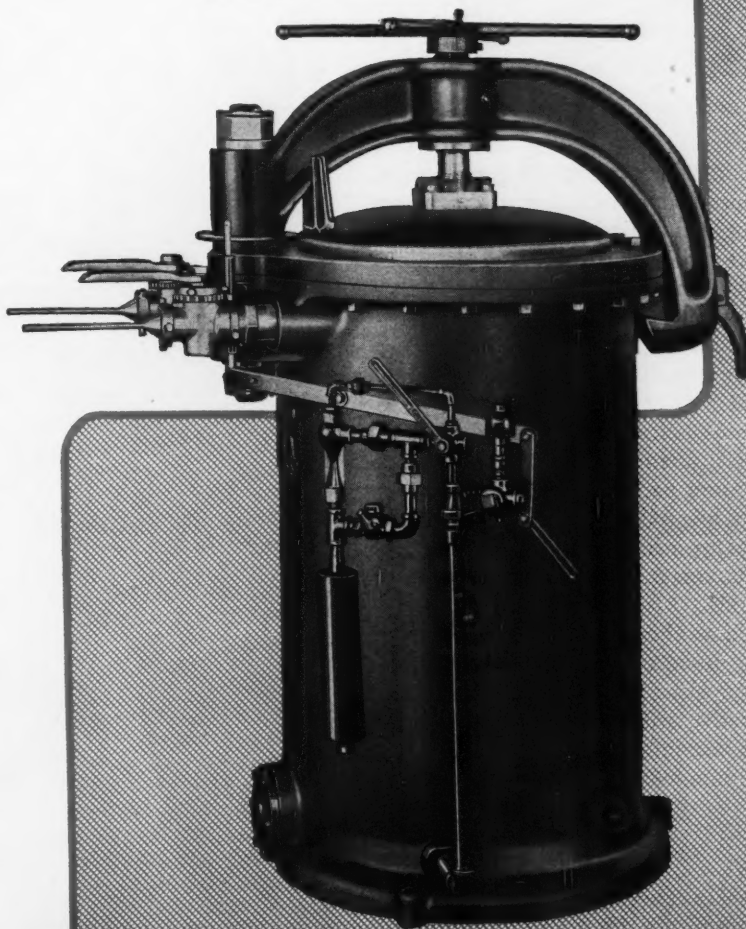
Patented, stainless alloy Micro-Set Stuffer Valve is leak proof, non-binding and easily disassembled for cleaning.

Two stuffer cocks on all but 100 lbs. size.

Two sets of stainless stuffer tubes with each stuffer (except 100 lbs. size, which is equipped with one set).

Zerk grease fittings throughout.

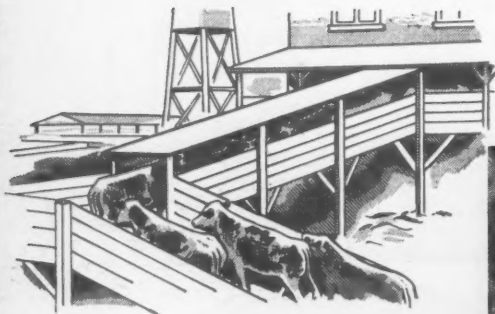
Inquiries from the Chicago area should be addressed to The Cincinnati Butchers' Supply Company, 824 West Exchange Avenue, Union Stock Yards, Chicago 9, Ill.



THE *Cincinnati* BUTCHERS' SUPPLY COMPANY
CINCINNATI 16, OHIO

LINK-BELT offers you ONE RESPONSIBILITY

for conveying and power transmission machinery

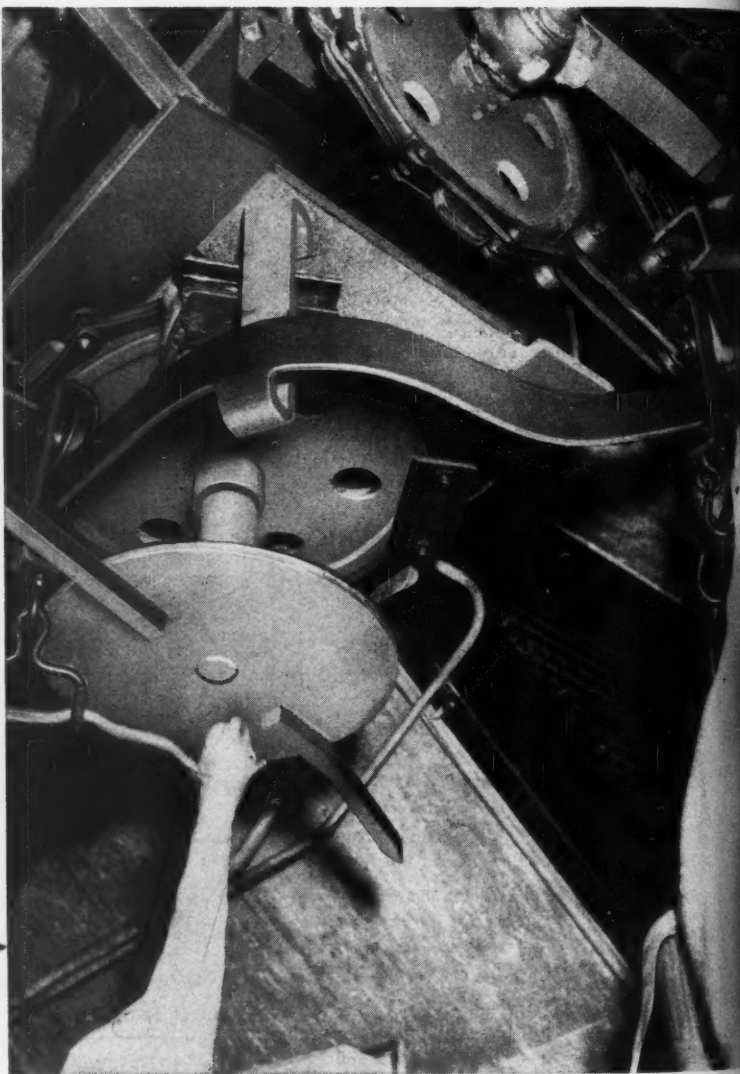


Get the finest in conveying and power transmission machinery. It can be as simple as calling in a Link-Belt engineer while you're still in the planning stage. For the Link-Belt line is designed and built to the highest standards in the industry and backed by more than 50 years' experience in this field.

Link-Belt engineers have devoted special attention to the problems of the meat packing industry and its related by-products. They can show you ways to increase production . . . reduce costs . . . improve sanitary conditions.

Shown here are a few of the Link-Belt products that may fit into your plant. Your nearest Link-Belt representative will be glad to give you complete information on any of them. Call him today.

→
OVERHEAD CONVEYORS furnish the ultimate in efficient handling through every operation from kill through cooler. They keep floors clear . . . put ceilings to work . . . operate in any plane . . . accommodate any building arrangement.



"CA"
of a
from
opera

SCRE
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grind
Avail

POUL
birds
Chick
with

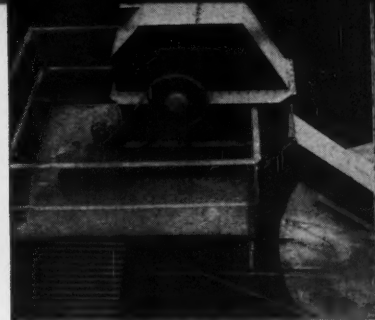
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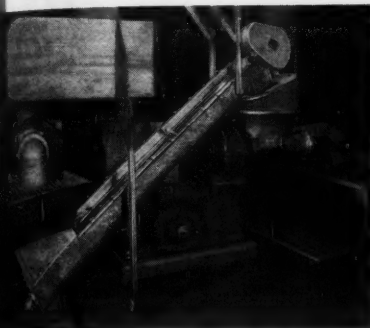
"CA" VIBRATING SCREENS offer efficient sizing of a great variety of materials, removal of fluff from cracklings, and many similar, demanding operations.



LIQUID VIBRATING SCREENS remove coarse solids from wash water and sludge. Valuable by-products are salvaged, waste disposal simplified, load on sewage systems reduced.



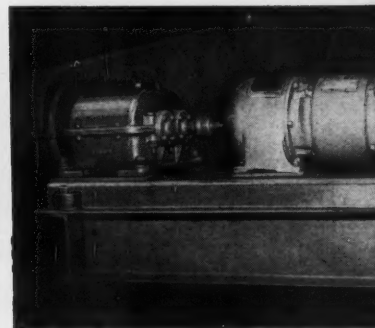
BUCKET ELEVATORS are available in a range of types and sizes for fast, gentle dling of many materials. Advanced feature sure proper filling, free and clean discharge



SCREW CONVEYOR is sanitary, dirt- and moisture-proof. Here sausage meat moves from grinders to mixers in a galvanized conveyor. Available in stainless steel for special jobs.

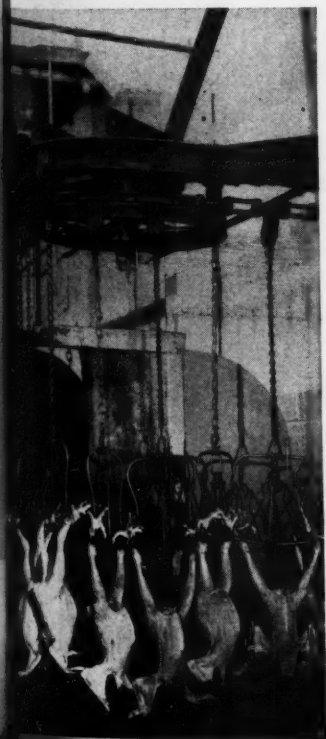


BELT CONVEYORS offer flexible, low-cost handling, for a wide variety of bulk and packaged materials. Efficient Link-Belt roller bearing idlers assure long life, low maintenance.



POWER TRANSMISSION MACHINERY. Link-B complete line is typified by this efficient ation that includes Link-Belt fluid, herringbone gear and roller chain drives.

POULTRY CONVEYORS easily handle 4000 birds per hour with rivetless steel chain. Chickens are automatically positioned with belly side out to save workers' time.



Choose from the broad line of LINK-BELT quality products

BEARINGS—Anti-friction Ball and Roller, Babbitted, Bronze

CAR SPOTTERS & HAULAGE SYSTEMS

CAR DUMPERS & SHAKERS

CHAINS—Ewart Detachable, Flat-Top, Malleable Iron, Promal, Rivetless, Roller, Silent, Steel, Ice, Swivel

CONVEYORS & ELEVATORS—Apron, Belt, Bucket, Bulk-Flo, Chain, Feeder, Flat-Top, Flight, Gravity-Discharge, Overhead

Trolley, Oscillating, Overhead Pusher, Peeling Table, Rotor Lift, Screw, Semi-Portable Slider Type Belt, Tray

ICING EQUIPMENT—Crushers, Pulverizers, Bunker Icers

DRYERS, COOLERS, ROASTERS—Multi-Louvre, Roto-Louvre, Monotube, Vibrating

ENCLOSED DRIVES—Fluid, Helical, Gearmotor, Herringbone, Motogear, Worm

POWER TRANSMISSION MACHINERY—Bearings, Clutches, Collars, Couplings, Differential Back Stops, Gears, Sprockets, Enclosed Gear Drives, Fluid Drives, Roller Chains, Silent Chain Drives, Speed Reducers, Takeups, Variable Speed Drives

SCREENS—Bar, Liquid, Vibrating Water

SEWAGE & INDUSTRIAL LIQUID TREATMENT PLANT EQUIPMENT—Bar Screens, Sludge and Grease Collectors

Service is available from these LINK-BELT Company sales offices

Albany 7	444 Broadway
☆Atlanta	1116 Murphy Ave., S.W.
Baltimore 18	2315 St. Paul St.
Birmingham 3	2026 Second Ave., N.
☆Boston 15	136 Brookline Ave.
Buffalo 3	295 Main St.
Charlotte 2, N. C.	112 S. Tryon St.
☆Chicago 9	301 W. Pershing Rd.
Cincinnati 2	138 E. Court St.
Cleveland 15	1422 Euclid Ave.
☆Dallas 1	500 Latimer St.
Denver 2 • Schloss & Schubart	1626 Wazee St.
☆Detroit 4	5938 Linsdale Ave.
Duluth 2	301 W. First St.
Grand Rapids 7	525 Burton St., S.W.
☆Houston 1	3203 S. Wayside
Huntington 9, W. Va.	1009 Fifth Ave.
Indianapolis 6	220 S. Belmont Ave.
Jacksonville 2	137 E. Forsyth St.
☆Kansas City 8, Mo.	2630 Holmes St.
☆Los Angeles 33	361-369 S. Anderson St.
Louisville 2	136 S. Fourth St.
Milwaukee 3	808 N. Third St.
☆Minneapolis 5	200 Lyndale Ave., N.
Moline, Ill.	1614 1/2 Fifth Ave.
Newark 8, N. J.	607 Clinton Ave.
New Orleans 12 • R. J. Tricon Co.	747 Tchoupitoulas St.
New York 7	233 Broadway, Room 3100
☆Oakland 7, Calif.	1025 Harrison St.

☆Includes Factory Branch Store

☆Philadelphia 40	2045 W. Hunting Park Ave.
☆Pittsburgh 13	5020 Centre Ave.
☆Portland 9, Ore.	1637 N.W. 14th Ave.
St. Louis 1	317 N. 11th St.
☆Salt Lake City 1	108 S. 4th West St.
☆San Francisco 24	400 Paul Ave.
☆Seattle 4	3405 Sixth Ave., S.
☆Spokane 13	North 1305 Washington St.
Washington 1, D. C.	740 Eleventh St. N.W.
Wilkes-Barre	15 W. Market St.
Wilmington 43, Del.	805 Orange St.

EXPORT DIVISION

New York 7 Room 2680, 233 Broadway

IN CANADA—Link-Belt Limited

☆Toronto 8	731 Eastern Ave.
☆Montreal 15	945 Beaumont Ave.
☆Winnipeg	1315 Portage Ave.
☆Vancouver 12	2550 Boundary Road
☆Swastika, Ont.	8 Boisvert St.
Halifax, N. S. • Austen Bros. Ltd.	118 Hollis St.
Hamilton	75 James St. S.
Elmira, Ont. (Foundry)	19 Church St. E.

IN AFRICA—Link-Belt Africa Limited

☆Springs, Transvaal, Union of South Africa.
Industry Rd., New Era, P.O. Box 287

IN AUSTRALIA—Link-Belt Company Pty. Ltd.

☆Sydney, N.S.W. 17 Goulburn St.
Distributors and Representatives throughout the World

LINK-BELT



Afral **CURE**

"HONEY SWEET" SUGAR CURE—

**CONTAINS THE NECESSARY AMOUNT OF
ESPECIALLY PREPARED SUGAR, AND NO SALT**

- ★ **MOST UNUSUAL COLOR**
- ★ **FINE, SWEET FLAVOR**
- ★ **LONGEST PRESERVATION**

OF CURED SAUSAGE AND S. P. MEAT

Manufacturers of Binders, Seasonings, Dry and Liquid
Seasoning Compounds

AFRAL

C O R P O R A T I O N

1933 SOUTH HALSTED ST.

CHICAGO 8, ILL.



**Pick Pak . . . perfect display
for premium sliced bacon!**



**Wallet Pak . . . adds the "quality
look" to sausage specialties!**



**Look-Pak . . . best showcase
yet for link sausage products!**

No brand distortion!

Marathon meat packages



**Wonder White Lard Carton
. . . looks right, stays white!**

No wrinkled brand distortion on Marathon meat and lard packages. Labels print bright and clear, stand out bold and vivid. No guess-work, either, for the woman who shops. She sees your brand . . . sees your product . . . remembers your name when she comes back for more. All packages, made from Marathon Q-board, are pure white, with strength and rigidity that speeds machine or semi-automatic packaging. Get full details from your Marathon representative. Or write direct to Marathon Corporation, Menasha, Wisconsin.



She's a once-a-week shopper.



Will she purchase your canned meat products?

The housewife likes the *convenience* of buying canned meat in its many varieties for planning her weekly menus. She wants to economize by getting just the right quantities to serve her family—meats she can keep handy for every occasion.

That's why she is buying more and more canned meats.

Are you getting your share of the increasing profits that canned meats return every year?

To help you turn your problems to profits, Canco's superior services are at your call. Canco's Research Laboratories, Testing Kitchens, Service Engineers, and many other highly trained specialists are always available to help

you on any problem you may have concerning the production of canned meats.

For bigger profits and better business, it will pay you to call Canco . . . *today!*



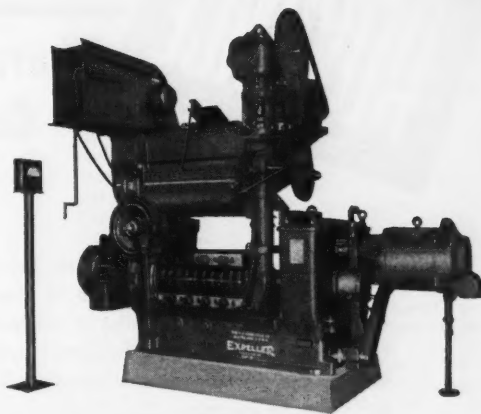
PROFITS ARE SOMETIMES AS ELUSIVE AS FLYING SAUCERS!



Profits in certain departments in rendering and meat packing plants today are almost as elusive as flying saucers. We're thinking primarily about your inedible department. If profits are scarce in your inedible department we have a suggestion for you. Consider buying an Expeller*. We have learned through many calls throughout your industry that the plant with Expellers is faring better today than its competitors. Why? Because the Expeller-equipped plant has lower labor costs since Expellers are semi-automatic. Furthermore, executives tell us that they have little trouble disposing of Expeller meat scrap since it has a market preference. You see, Expeller meat scrap eliminates fluff, is easily ground, does not set up in bags, and has a higher protein unit. It might well pay you to change to Expellers *right now*. Write today. Let an Anderson engineer help analyze your situation.

THE V. D. ANDERSON COMPANY
1965 West 96th Street • Cleveland 2, Ohio

*Exclusive Trade Mark reg. in U.S. Patent Office and in foreign countries.



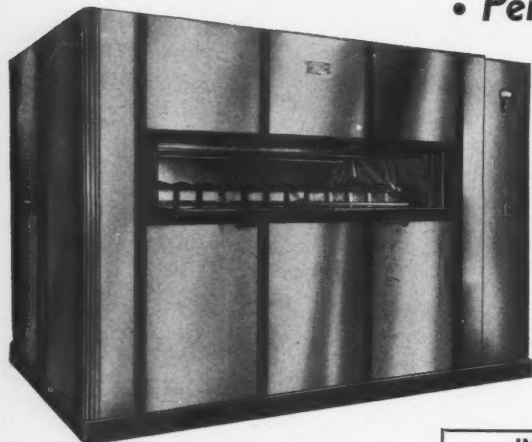
ANDERSON DUO CRACKLING EXPELLER

**Only ANDERSON
makes EXPELLERS**

ADVANCE

Revolving MEAT LOAF OVENS

for • Increased Loaf Production
• Perfect Uniformity...Loaf After Loaf



NO. 96 MEAT LOAF OVEN. Capacity of 96 loaves. Maximum gas consumption 60,000 BTU's per hour. Shown here with stainless steel exterior.

"The oven with a past . . . and a future"
(There are many 20-year-olds still in active operation)

SPECIAL FEATURES

- Partlow Thermostats
- Safety Pilots and Electric Ignition.
- Completely Stabilized Shelves.
- All-Steel and Aluminum Construction.
- Drop-Type Doors—Serve as Platforms.
- Minimum Heat Loss—Walls Packed on job.
- Modern Design. Clean, Long-lasting Exteriors—Choice of Porcelain, Stainless Steel, Aluminum.

IMPORTANT DIMENSIONS OF REVOLVING MEAT LOAF OVENS

	ITEM	OVEN SIZE		
		#96	#144	#192
CAPACITY	Meat Loaf Capacity	96	144	192
	Number of Shelves	4	6	8
OUTSIDE DIMENSIONS	Front Length	112"	112"	112"
	Depth (front to back)	78"	90"	108"
	Height	84"	96"	108"
FUEL	Maximum Gas Consumption (Rate is higher for hams) 10,000 BTU's per hour.	60,000 BTU'S	100,000 BTU'S	120,000 BTU'S
SHIPPING WT.		5000 lbs.	6000 lbs.	8000 lbs.
LARGEST PIECE IN SHIPMENT		79" x 98"	91" x 98"	103" x 98"

ADVANCE

*Thermostatically
Controlled*

DIP TANKS

FOR that rich, brown, sales-producing crust. Economical, easy to operate, simple to clean. Automatic heat controls prevent smoking of shortening. Also ideal for browning hams and other meat products, and for gelatin and paraffin dips. Capacity: 9-12 loaves per dip. Gas or electric.



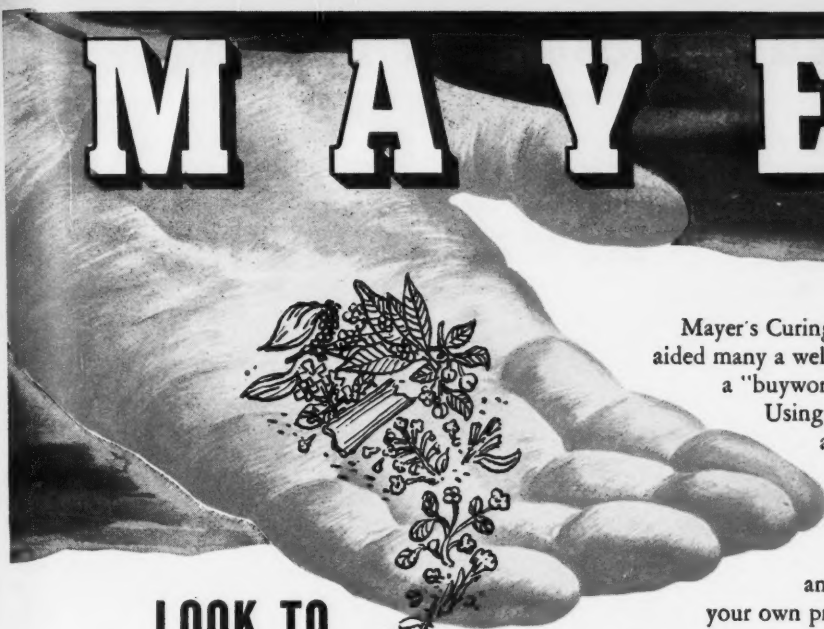
710 S. 18th St.
St. Louis 3, Mo.

Write for
Information

ADVANCE OVEN COMPANY

Mfg. in Canada by Fort Eng. & Sales, Ltd., 1971 Tansley, Montreal 24

MAYER



LOOK TO H. J. MAYER FOR ALL YOUR CURING AND SEASONING NEEDS

Mayer's Curing and Seasoning Materials have aided many a well-known meat specialty to become a "buyword" at the nation's meat counters.

Using Mayer's *ready-mixed* compounds assures consistent uniformity of product . . . from batch to batch and from year to year. It also cuts costs . . . by eliminating the uncertainty and high labor cost of mixing your own preparations.

Count on Mayer's 25 years of experience and "know-how" to duplicate exactly your own successful formula . . . or to help you develop sales-making formulas for new products. H. J. Mayer has studied *people* as well as food processing. We can be helpful in getting a new product off to a flying start . . . by keying the flavor *exactly* to the preference of *your* customers, whoever and wherever they are.

H. J. Mayer enjoys a close and cordial relationship with leading meat packers all over the country. Your closely guarded formulas may be safely entrusted to our tightly knit organization. Write us regarding your needs.

"The Man You Knew"



The Founder of
H. J. Mayer & Sons Co., Inc.

MAYER'S CURING COMPOUNDS

NEVERFAIL 3-Day Ham Cure

Special NEVERFAIL Curing
Compound (for sausage meat)

NEVERFAIL Curing Compound
for dry cure bacon only

NU-NEVERFAIL Curing Compound
for dry cure bacon only

UNIVERSAL Curing Salz

ALL-AMERICAN Cure

GOLDEN GLOW Liquid Cure

MAYER'S PREPARED SPECIAL SEASONINGS (Natural Spice)

Frankfurters
Bologna
Braunschweiger
Liver Sausage
Goose Liver Sausage
Summer Meitwurst
Thuringer
Salami
Cotta Salami
Chicken Loaf
Scrapple
Head Cheese
Lyone
Pork Sausage
Chili Con Carne
Mortadella
Pepperoni
Rouladen
Polish Sausage
Blood Sausage

Cervelat
Landjager
Meat Loaves
Etc. Etc.

MAYER'S PREPARED SPECIAL SEASONINGS (Soluble Type—Salt or Sugar Base)

OSS Frankfurter
OSS Bologna
OSS Braunschweiger
OSS Pork Sausage
OSS Virginia Style Ham
Spice
OSS Meat Loaf

MAYER'S SOLUBLE SPICES (Salt or Sugar Base)

OSS Sage
PEPPERETTE
OSS Celery
and many others

MISCELLANEOUS REQUIREMENTS

Binders
Emulsifying Agents
PEPPERIM (black pepper
replacement)
Imitation Black Pepper
Imitation White Pepper
Casing coloring
Disinfectants
Bacon Hangers (stainless
steel)

H. J. MAYER & SONS CO., inc.

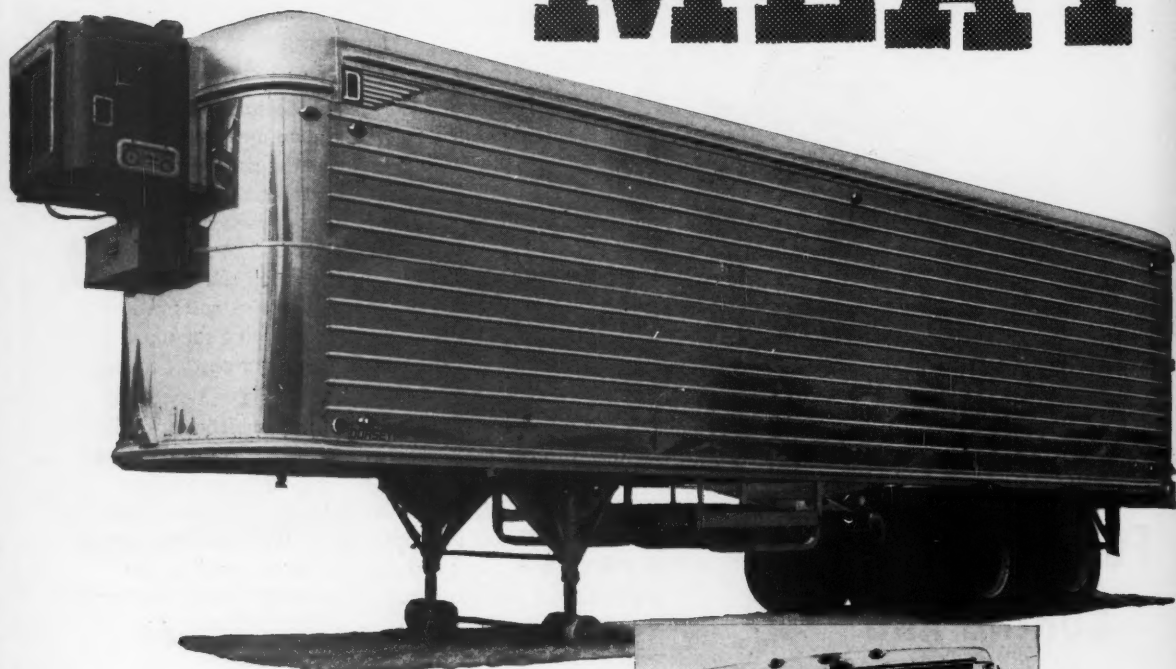
6815 SOUTH ASHLAND AVENUE—CHICAGO 36, ILLINOIS

Plant: 6819 South Ashland Avenue

IN CANADA: H. J. MAYER & SONS CO. (Canada) Limited, WINDSOR, ONTARIO

Designed expressly for hauling

MEAT

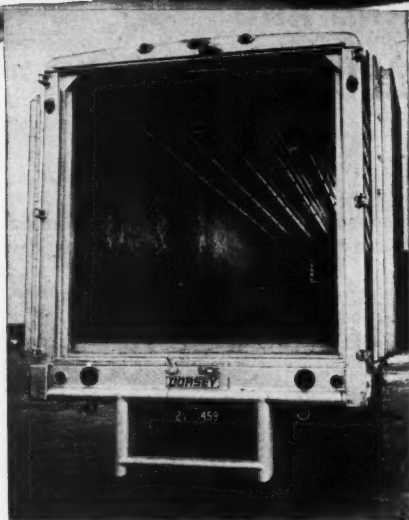


The Dorsey Meat Van is more than a "reefer" with meat rails added: it's a trailer engineered from top to bottom especially for the meat industry.

Exclusive Dorsey-designed extruded aluminum flooring (optional extra) is positively sealed against leakage. Insulation up to 6 inches is available to meet the operator's requirements. Ultralite is sealed in aluminum foil.

Road delays due to tandem-troubles are virtually eliminated by Dorsey's improvements in design. The Dorsey tandem requires **no lubrication**; owners report 200,000 to 300,000 miles between re-bushings.

Dorseys are delivered either complete with refrigeration units, or prepared for quick installation of equipment already owned by the purchaser.



Meat rails are welded in as an integral part of the basic framework of Dorsey Refrigerator Vans.

**Your Dorsey
Distributor
can save you
money!**



DURABLE DEPENDABLE DORSEY TRAILERS
ELBA, ALABAMA

How much per minute

DOES PRODUCTION COST YOU?

Ben Franklin said, "Take care of the Pennies and Dollars will take care of themselves." Believe me Ben knew what he was talking about. Take a look at your own plant. Where can you save money and increase your profits. You have little or no control over the cost of your raw material. You can however, cut your production costs. *How?* By more efficient handling, more efficient slaughtering machinery, more efficient plant layout. *Every-minute you save in processing results in greater profits for you.* Here's where we can help you. Dupps engineers have years of experience in the design of efficient slaughtering and processing procedure. Let us survey your plant and give you our honest opinion on the efficiency of your methods and machinery. There is no obligation on your part for the service. Naturally we'd like to see you use Dupps Slaughtering equipment, but the choice is yours. Write us now.



THE **DUPPS** CO., GERMANTOWN, OHIO



*As Close to You as
Your Telephone*

One of America's
Largest Can Manufacturers

CROWN CAN

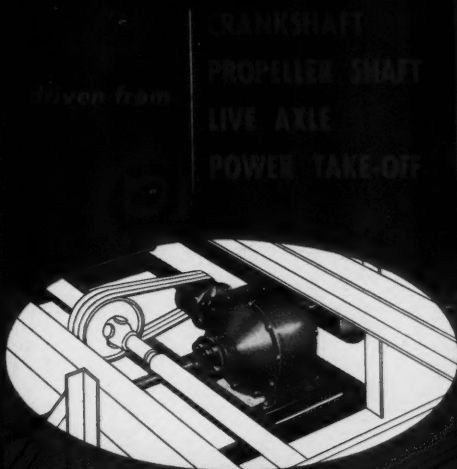
Division of
CROWN CORK & SEAL COMPANY

Philadelphia, Chicago, Orlando, New York,
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You CAN'T Buy Better CANS

now!

a perfected and
simplified mobile
refrigeration unit



for controlled protection of perishable foods in transit

KOLD-TRUX

Truck refrigeration can now be as fully automatic and dependable as stationary plant systems. The Kold-Hold "Kold-Trux" Unit refrigerates while you drive to maintain any temperature from -10° to $+50^{\circ}$ as long as you want it. It builds refrigeration so smoothly the driver can't tell it's there. For complete details send for the new Kold-Trux Bulletin.

FULLY AUTOMATIC
POSITIVE TEMPERATURE CONTROL
ENGAGES AND DISENGAGES WITHOUT SHOCK
ELECTRICAL PLUG-IN FOR "OFF THE ROAD" OPERATION
FIELD PROVEN THROUGH YEARS OF USE

KOLD-HOLD

protects every step of the way

KOLD-HOLD MANUFACTURING COMPANY

460 E. Hazel St., Lansing 4, Michigan

Is the air circulating on your meats **CONSTANT and UNIFORM?**



NO? Then it's high time that you checked into the advantages of GEBHARDTS Controlled Refrigeration Systems. GEBHARDTS maintain a uniform, controlled circulation of air that is essential in keeping meat at its sales best! Better working conditions too . . . no blowing and no drafts! Get the facts today!

GEBHARDTS ARE FABRICATED OF HIGH-LUSTRE STAINLESS STEEL TO INSURE SANITATION!

Sales and Service in all principal cities.



ADVANCED ENGINEERING CORPORATION

1802 WEST NORTH AVENUE

TELEPHONES: FRANKLIN 4-0559

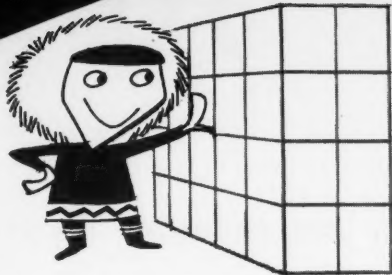
MILWAUKEE 5, WISCONSIN

FRANKLIN 4-2478

for low temperature insulation!

Specify

STYROFOAM

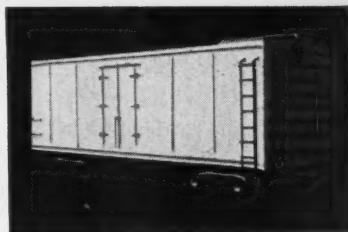


low

thermal

conductivity!

Styrofoam is an ideal insulating material for refrigerated railroad cars and truck trailers, as well as cold storage warehouses, meat packing plants, locker plants and ice cream storage.



Styrofoam® is an effective low temperature insulation material with a long service life. The resistance of Styrofoam to the passage of water and water vapor makes it possible to offer a material that maintains low thermal conductivity. Made of lightweight plastic (Dow polystyrene expanded approximately 40 times) Styrofoam has a non-interconnecting cellular

structure that resists the passage of water and water vapor.

This same cellular construction of "dead air cells" retards the transfer of heat. Styrofoam is odorless, and it resists mold, rot and vermin. Lightweight—it is easy to handle and install. Available in rigid board form, Styrofoam can be cut to desired shapes with conventional hand or power

woodworking tools.

Whatever your low temperature insulating problem may be, investigate Styrofoam. Laboratory tests and field performance have shown it to be the most nearly perfect low temperature insulating material yet developed. It delivers effective insulation at an extremely low cost per year of service life.

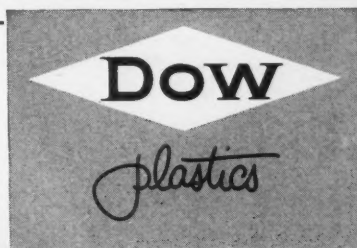
THE DOW CHEMICAL COMPANY • *Plastics Department — PL 427* • MIDLAND, MICHIGAN
New York • Boston • Philadelphia • Atlanta • Cleveland • Detroit • Chicago • St. Louis • Houston • San Francisco • Los Angeles • Seattle • Dow Chemical of Canada, Limited, Toronto, Canada

—write today!—



The Dow Chemical Company
Plastics Department, PL 427, Midland, Michigan
Please send me your booklet containing information on Styrofoam,
the most nearly perfect low-temperature insulation material.

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Company _____
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Yes, Sir, every time...

The Producer that's **PROUD OF HIS PRODUCT** specifies

ADLER

Stockinette

as the **finest cover for FINEST MEATS**

For **QUALITY** smoked meats, economy in packing, shipping, storing, freezing, specify **ADLER**. Widest range in widths and construction assures the **RIGHT** Stockinette cover for any cut, all sizes, for ham, beef, veal, pork, etc. By the makers of quality knit products for over 80 years. Write for **FREE** catalog and price list.

THE ADLER COMPANY, Dept. M
CINCINNATI 14, OHIO

WORLD'S LARGEST MANUFACTURER OF STOCKINETTE

you get substantial
**PRODUCTION
ECONOMIES**

when you make

Skinless
**smoked
Pork Sausage**



You need no new equipment to obtain substantial savings when you make SKINLESS Smoked Pork Sausages. Visking NOJAX casings are more economical to buy and to link. They help keep present equipment busy during seasonal frankfurter decline . . . peeling crews intact.

But savings aren't your only gain. SKINLESS Smoked Pork Sausages have volume building eye-appeal and sales-

appeal because *they have no skins*. Links are straight and uniform with bright, appetizing meat color. They keep their shape at normal temperatures. You can sell SKINLESS Smoked Pork Sausages in unit packages or in bulk.

Ask your Visking representative or write direct for details on the new mechanical peeler. It will cut your production costs on SKINLESS Pork Sausage.

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THE VISKING CORPORATION

6733 West 65th Street, Chicago 33, Illinois

I am interested in cutting my smoked pork sausage costs. Please give me the complete information.

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COMPANY _____

TITLE _____

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ZONE _____

STATE _____

☐ Check here for details on the NEW mechanical peelers

YOU can profit by the nationwide, ready-made audience of *Ac'cent*® enthusiasts!



Ac'cent is pure monosodium glutamate . . . and it's known, used and praised by everyone important to your business.

Wholesalers are familiar with Ac'cent. Retailers sell Ac'cent in their stores. Housewives, from coast to coast, cook with Ac'cent. And these same housewives prefer and *go for* the hundreds of packages of food products whose labels include monosodium glutamate . . . *Ac'cent*.

When you "process" with Ac'cent, you're improving the flavor of your product and the status of your profits. Ac'cent does wonderful things to poultry, meats and vegetables . . . practically every food product with which salt is used. Ac'cent improves *natural* flavor during processing—when flavor is at its peak—and *holds* it. Yet Ac'cent adds no color, flavor or aroma of its own.

With Ac'cent (pure monosodium glutamate) on your label, you give your product a flavor-edge over competition . . . give it a chance to win new friends and influence new customers! They're a ready-made audience . . . and a perfect set-up for you!

***Ac'cent*®**
PURE MONOSODIUM GLUTAMATE
...makes good food taste better!



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Through every channel of distribution—from factory to warehouse to retailer, by train, truck or plane—Gaylord quality control and scientifically engineered design assures shipping containers that provide safe delivery of your product.

MEAT PROCESSORS: Check with the Gaylord sales office nearest you for the latest types of containers developed by Gaylord's Research and Engineering Division for your industry.



Their unseen quality gives you an extra margin of safety.

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CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT BAGS AND SACKS • KRAFT PAPER AND SPECIALTIES



**FOR RICHER, TASTIER, MORE PROFITABLE
SAUSAGES AND LOAVES, STANDARDIZE ON**

BULL-MEAT-BRAND BINDER

*The Best
You Can Buy
Because . .*

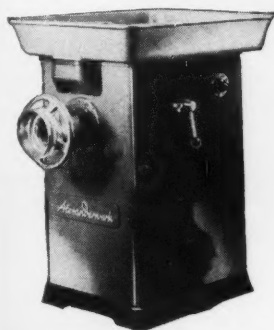
- ★ It Takes Up and Holds More Moisture.
- ★ Greatly Increases Yield.
- ★ Blends Perfectly with Meat and Fat.
- ★ Improves Flavor and Food Value.
- ★ Unlike other flours, it doesn't release the meat juices and moisture in the heat of the smoke-house. Smoking and cooking temperatures increase the binding power.
- ★ It's not a substitute — IT'S AN IMPROVEMENT. Its leadership in quality has been unchallenged for over 40 years.



B. Heller & Company

3925 S. Calumet Ave., Chicago 15, Illinois
Manufacturing Chemists Since 1893

Standardize on
MATADOR
for LOW COST
QUALITY PRODUCTION

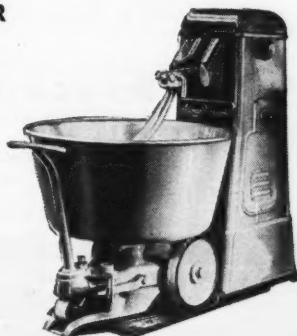


MATADOR JUNIOR GRINDER

Produces unequalled quality, cool grind. Coarse and fine in one operation. Capacity up to 3000 lbs. per hour. Feed pan of corrosion resistant alloy with large capacity. Streamlined with exclusive sanitary and safety features. Equipped with throw-out lever for instant change of knives, plates and feed screw. Cylinder housing accommodates either one plate and knife or as many as three plates and two knives.

MATADOR ROTARY MIXER

Mixing bowls mounted on wheels . . . can be moved to any part of the plant . . . at the same time substitutes for hand trucks. Eliminates two operations . . . saves time and labor. Delivers a perfect quality mix within a few minutes . . . does not crush nor warm the mix . . . capacity 500 lbs. Excellent for salami, cervelat, thuringer and other specialties. Sanitary . . . easy to clean . . . all parts readily accessible.



Descriptive literature with complete details of each machine available on request. Make a note to write for your copy today.

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MATADOR SENIOR GRINDER

An amazing new engineering achievement.

Has exclusive operating and safety features.

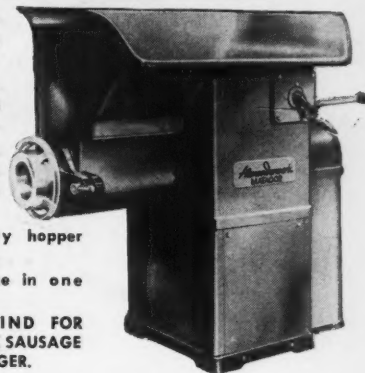
Large pitch feeder for CONTINUOUS RAPID GRIND.

Largest capacity hopper ever designed.

Coarse and fine in one operation.

DRY SHRED GRIND FOR QUALITY PORK SAUSAGE AND HAMBURGER.

No heating of product . . . no backing up.



MATADOR SILENT CUTTER

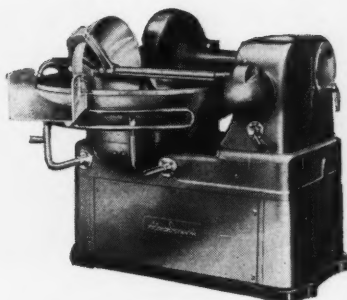
Advanced modern design with many exclusive safety and sanitary features.

Precision built . . . ball bearings throughout . . . three sizes 75, 150 and 300 lbs.

Knives can be easily adjusted to accommodate desired cut.

Has lid-locking device for maximum protection.

Self-emptying unit optional.



MATADOR HYDRAULIC STUFFER

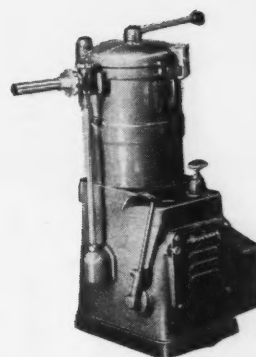
A self-contained hydraulic unit ideal for the small sausage kitchen.

The lid can be opened and closed with one movement of the hand.

Has simple knee lever control, leaving operator free use of both hands.

Precision made with control valve of stainless steel insuring smooth operation, eliminating air leakage.

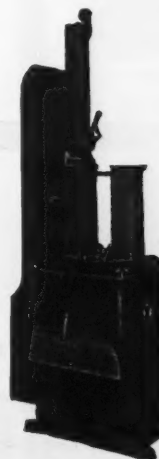
Air pressure stuffers also available in larger sizes.



DIANA DICING MACHINE

for . . . STEW MEATS
 . . . BACK FAT CUTTING
 . . . AND OTHER SPECIALTIES. CUTS . . .
 FATS . . . RAW AND
 BOILED BEEF . . . LAMB
 . . . VEAL . . . CHICKEN
 . . . AND OTHER FOODS.
 In Uniform Cubes from
 3/16" to 1 1/4". Also cut
 plates 1 1/2" square from
 1/16" up, and strips up
 to 5" in length. Capacity
 up to 1800 lbs. per
 hour.

MANY PROMINENT
 PACKERS AND CANNERS
 ARE SATISFIED
 USERS OF DIANA DICING
 MACHINES.



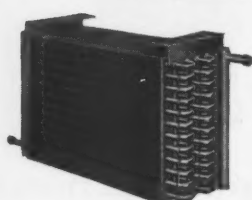


HOWE

PUTS THE INDIAN SIGN ON HIGH COSTS IN REFRIGERATION



HOWE POLAR CIRCLE COILS

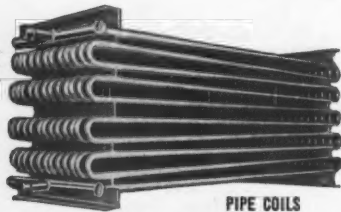


FIN COILS



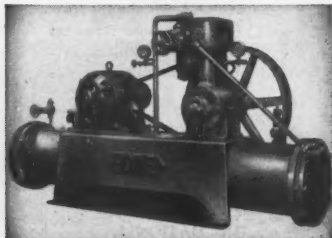
UNIT
COOLERS

ACCUMULATORS, OIL
TRAPS AND RECEIVERS

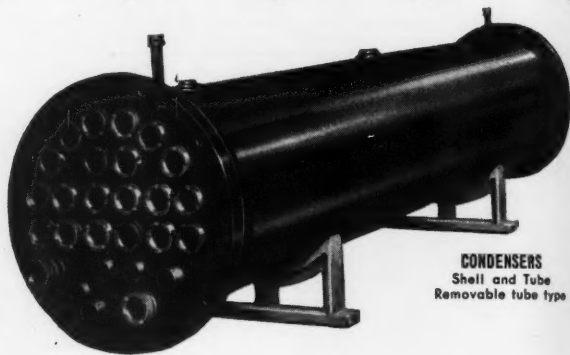


PIPE COILS

AMMONIA COMPACT UNITS



40
HOWE
YEARS



CONDENSERS
Shell and Tube
Removable tube type

It's the final results that count! Your products, to preserve their best qualities, **MUST** be controlled constantly at the precise temperature and humidity. Constant control is also vital in storage cooling and freezing. This means you **MUST** have the best reliable refrigeration equipment; the kind that will do the job without high original cost, expensive maintenance or mechanical failure. **IT MUST BE RIGHT!**

Get the benefits of Howe's 40 years of practical, field-proved refrigeration knowledge, and their ruggedly built, trouble-free equipment. You save money, space, labor, time—with Howe individually engineered installations, regardless of size. Write for free booklet, or without obligation consult Howe engineers on your refrigeration problems.

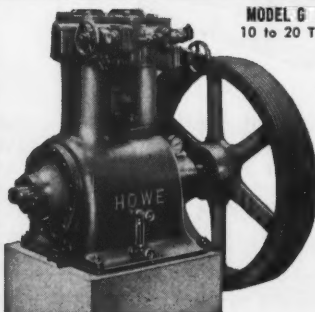
*A few territories still open . . . write for details
about the HOWE profit-plan for new distributors.*

HOWE ICE MACHINE CO.

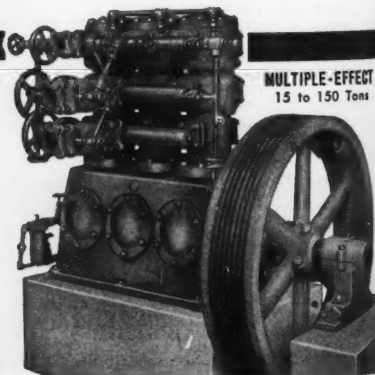
2823 Montrose Ave., Chicago 18

Cable: HIMCO, CHICAGO

DISTRIBUTORS IN PRINCIPAL CITIES

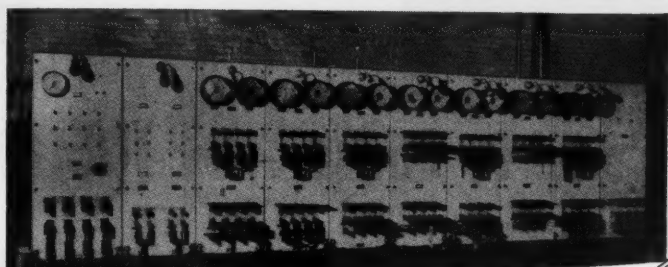
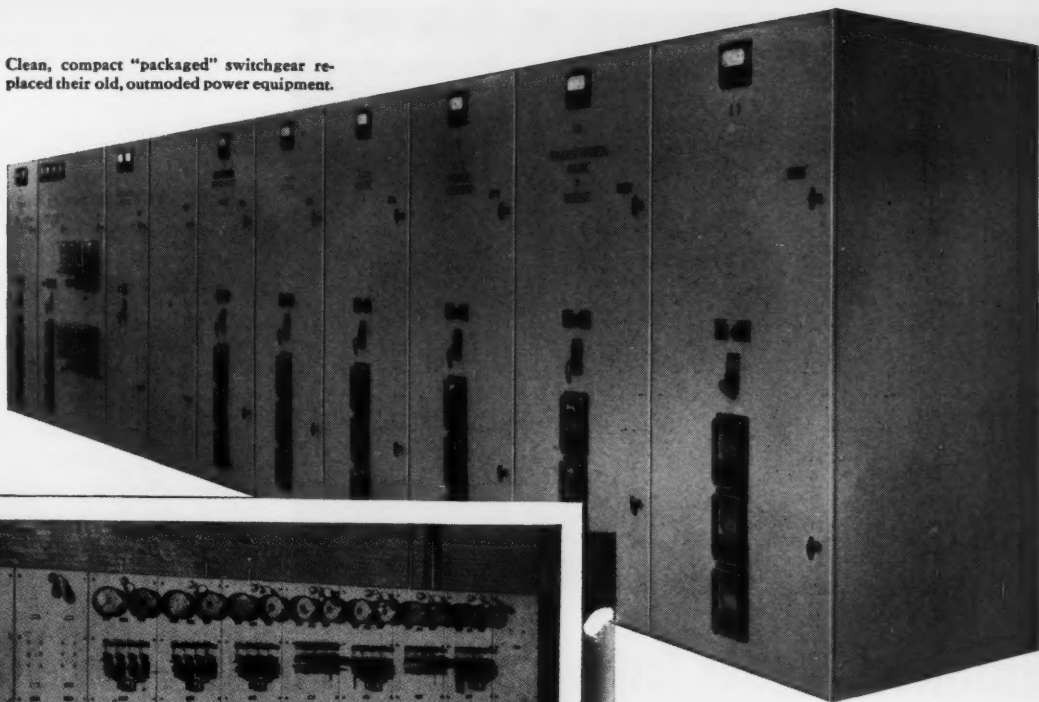


MODEL G
10 to 20 T.



MULTIPLE-EFFECT
15 to 150 Tons

Clean, compact "packaged" switchgear replaced their old, outmoded power equipment.



How a modernized Power Distribution System saves money for this meat packer

Recently, a middle western meat-packing plant discovered their outmoded power system was wasting money. The old system was of the wrong type, was unable to take care of new loads being added to the system, was undependable, and was costing money generally. So Westinghouse worked with them and their consulting engineers in planning a new system.

Old Outmoded Equipment Replaced

One of the first moves was to replace the dangerous old open-knife switch equipment with modern power centers like that shown above. These combined in one safe, compact unit both the transformers and the switchgear for a whole section of the plant.

Greater Safety and Flexibility

Besides being highly dependable, there are no exposed live parts to create a safety hazard. Their

packaged design permits additional units to be easily added as the demands on the system increase. The draw-out breakers permit easy maintenance.

Westinghouse Can Help You, Too

If your power system needs modernizing, or if you plan to build or expand, use Westinghouse know-how in the Food Industry to help you plan the power system or drives best suited to your needs.

J-94921

YOU CAN BE SURE... IF ITS
Westinghouse

**EQUIPMENT FOR
FOOD PROCESSING**





Uniform temperatures in the Smokehouse . . . that is the very essence of the JULIAN story. From a humble beginning as originators of the "varied flow" smokehouse air conditioning system to the prominence we now enjoy, we have constantly strived to keep Julian Smokehouses the finest and most dependable smokehouses made. We are very grateful for the nation-wide approval and endorsement enjoyed by Julian today.

Smoked Meats from Coast to Coast...by JULIAN

JULIAN SMOKEHOUSES deliver trouble-free, top performance right across the country . . . as they smoke the nation's meats to the public's satisfaction! Controlled manufacture every step of the way by experienced Julian personnel in Julian's own shops and foundry means *guaranteed performance!* Julian Smokehouses will keep your production going smoothly . . . and *on schedule!*



Contact Julian today!



A perfect working companion for a Julian smokehouse — The Mepaco 'Tipper' automatic smokemaker, simple operation, controlled density of cool smoke, one 'load' lasts 4 to 6 hours with maximum smoke delivery.

Julian **ENGINEERING COMPANY**

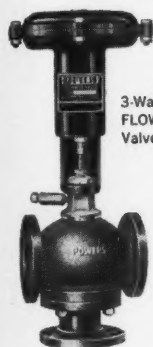
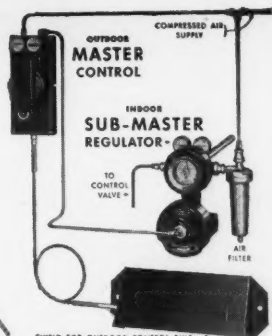
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WORTHINGTON

Mfg. Licensee — Canada: McLean Machinery Co., Ltd., Winnipeg

MASTROL SYSTEM
for Forced Hot
Water Heating



3-Way
FLOWRITE
Valve



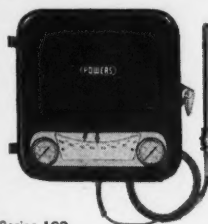
Pneumatic
Switches



FLOWRITE
Valve



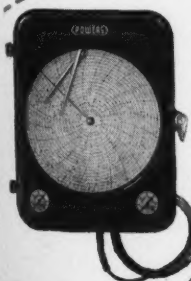
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Available
Packless



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Pneumatic
Indicating
Regulator



Right:
Static
Pressure
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Left:
Series 100
Recording
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Self-
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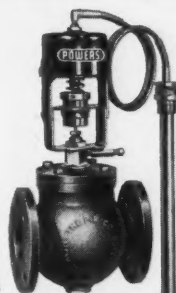
Thermostatic
Water Mixers

PNEUMATIC CONTROLS

FLOWRITE
Diaphragm
Valve



No. 11 Self-Operating Regulators



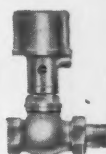
PNEUMATIC CONTROLS



Thermostat
Hygrostat



Radiator
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Packless Valves
Available



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For Heating and
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Most of your control problems
can be solved successfully with the aid
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application of some of our modern
products. Why not profit from our 60 years
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is U.S.P.

SOLVAY PROCESS DIVISION
ALLIED CHEMICAL AND DYE CORPORATION
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VOTATOR Lard Processing Units are designed for capacities of 3,000, 5,000, and 10,000 pounds per hour. VOTATOR Deodorizer requires less than half the stripping and vacuum steam needed for batch methods.



They choose fine shortening!

WITH all the desirable qualities of fine shortening—white, smooth, creamy texture; no need for refrigeration; neutral flavor—is it any wonder housewives choose it by brand name?

You can upgrade lard to produce fine shortening and take advantage

of this demand. The first step is to call on Girdler for an engineering analysis.

Girdler has a wealth of experience in the design and construction of lard-base shortening plants. And only Girdler can furnish the famous VOTATOR Lard Chilling

Apparatus for continuous, controlled, closed-system processing, and the VOTATOR Semi-Continuous Deodorizer.

Call today or write for further information. The Girdler Corporation, Votator Division, Louisville 1, Kentucky.

VOTATOR—T.M. Reg. U.S. Pat. Off.

The **GIRDLER** Corporation

VOTATOR DIVISION



For **71** years ...

"THE CASING HOUSE"

has supplied the Meat Industry everywhere

with

Natural Sausage Casings

TO OUR HOST OF FRIENDS:

We are most grateful for the confidence you have bestowed during the many years that it has been our privilege to serve you.

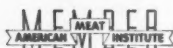
THE CASING HOUSE is one complete dependable source of supply for quality NATURAL CASINGS.

Well established sausage manufacturers will find it to their advantage to order their casing requirements from THE CASING HOUSE.

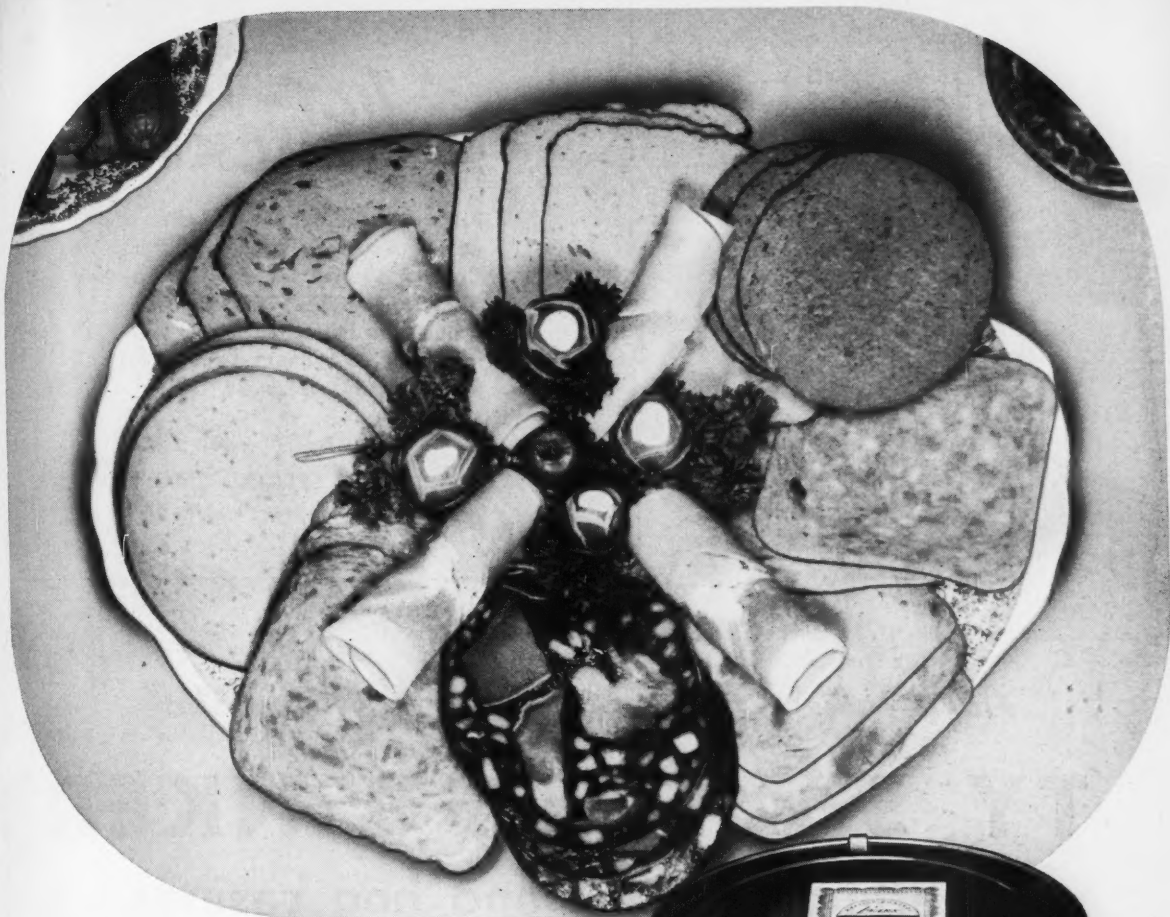
You expect the BEST and you get the BEST ALWAYS.

BERTH. LEVI & Co. INC.

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BOOST "COLD CUT" SALES

with the all-purpose flavor-booster . . . Fearn's
"C" Seasoning for sausages, loaves, canned products

Here's the *properly-balanced* seasoning that more and more packers are turning to for increased sales.

Fearn's "C" Seasoning is especially designed to enhance the over-all flavor of a wide variety of meats. For example: wieners, bologna, liver sausage, minced ham, pickle and pimiento, chicken, veal and all other loaves—canned meats, stews, soups, canned chicken and other specialty products.

Fearn's "C" Seasoning gives processed meat products a rich, full-bodied flavor, because, among its several ingredients, it contains the *proper level* of monosodium glutamate. Thus, it brings out the hidden flavors of the meat—and skillfully steps them up through an appealing, properly-balanced blend of seasoning! Economical to use. Make a test run soon.

Fearn's "C" Seasoning meets B.A.I. requirements.

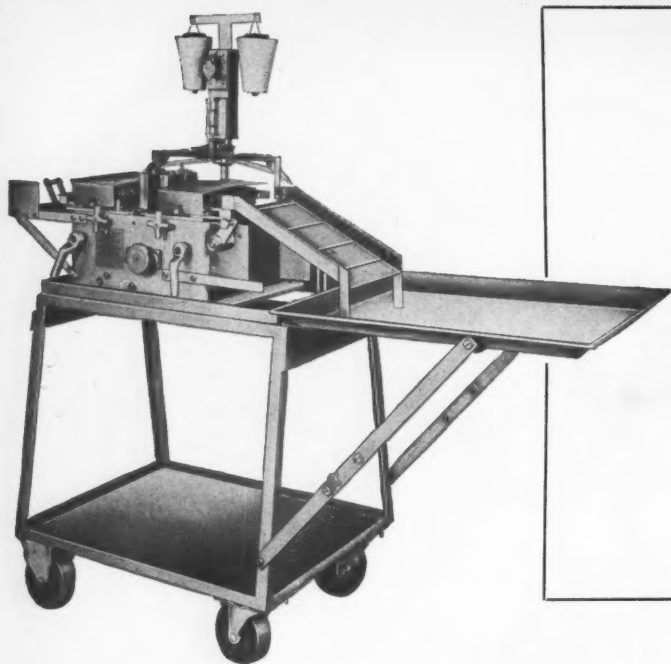


FEARN
flavors you can trust

Like all Fearn products, "C" Seasoning carries a coded Fearn Quality Control Certificate on every shipment made to you.

QUALITY CONTROL CERTIFIED BY *FEARN FOODS INC.*, FRANKLIN PARK, ILLINOIS

The National Provisioner—October 18, 1952



"TILT-TOP" TRUCKS

For Easy Cleaning and Lubrication
Better Accessibility to All Parts
Correct Height for Efficient Feeding
ALL STAINLESS STEEL
Adjustable Extension Pan
Ideal For Permanent Location
68" Long, 33" High, 24" Wide

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WRITE FOR SPECIAL CIRCULAR!

Adjustable "All-Purpose" Automatic

TY SAUSAGE LINKER

for artificial, sheep and hog casings

- ✓ CHANGE LENGTHS IN 2 MINUTES
- ✓ CHANGE DIAMETERS IN 2 SECONDS
- ✓ CHANGE TO "COCKTAILS" IN 5 MINUTES

Any length, 3 1/2" to 6 1/2" 114 LPM*
Any length, 1 1/2" to 2" 114 LPM
Any length, 7" to 13" 57 LPM

Any diameter up to 35 mm.

Diameters up to 18/20 mm. can be double-tied

WEIGHT: 210 lbs.

WIDTH: 20"

LENGTH: 36"

HEIGHT: 31"

*Links Per Minute

Over 2800 Ty Linkers in Use

- Portable
- Man Hour and Space Saving
- Use of Unskilled Operators
- **UNIFORMITY OF SIZE**
- Automatic Feeding
- Just Connect With Light Socket
- Improved Product Appearance

On the Market Since 1939

LINKER MACHINES, INC.

39 DIVISION STREET

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Saving The Industry 20,000,000 Man Hours Annually

"a Milprint package will get YOUR product OUT FRONT!"

No retailer interested in profit will bury packages as appealing as these. He'll move them *out front* where they melt shopper resistance and make sales!

These are packages produced in rich looking, quality speaking Milprint rotogravure on cellophane . . . just one example of the wide selections of printing processes and packaging materials you get from Milprint.

Want to get *your* product displayed *out front*? Just call your local Milprint man.

Milprint Rotogravure
Printed Cellophane
Wrappers

This insert printed by Milprint, Inc.
General offices: Milwaukee, Wis.
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Printed Cellophane, Pliofilm, Polyethylene, Acetate, Glassine, Foils, Folding Cartons, Bags, Lithographed Displays, Printed Promotional Material.

Milprint INC
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TOP MONEY-MAKERS *use the Proven*
Dressings for All Meat-Base Spreads . . .



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Special Meat Packers Blend



SANDWICH SPREAD

BRAUNSCHWEIGER SPREAD

HAM SPREAD

MELLO-MIX fulfills need for absorbing meat ends, breakages, and left-overs . . . and preparing them as a salable item. Proven formulas are available on request.



BARBECUE SAUCE—

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"JUST RIGHT WITH A MILD BITE"



*The accepted
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 all meat
 preparations.*

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Valuable cargo?

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And that's why you can be certain it's in good hands when you route it Spector. Here's why:

ULTRA MODERN REEFER FLEET
for all types of perishable cargo. Most with Hunter temperature control units.

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assigned to perishable loads, both at the terminal and en route.

PERIODIC ROAD CHECKS.
Fast Relay System gets your load there faster. "En Route" cargo checks at every Relay station.

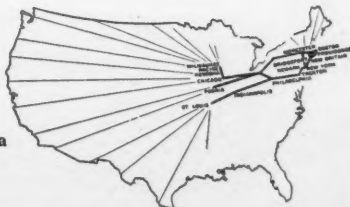
EXPERIENCE RECORD
of nearly 20 years includes hauling assignments for leading packers throughout the nation.

Write or phone for Points of Service Today
the wise selector routes it

SPECTOR

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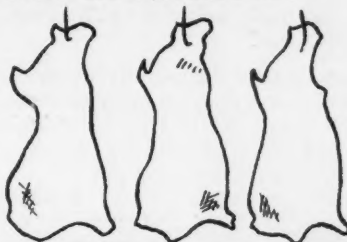
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there are cows



and there are shrouds



but only
the **Tufedge** Beef Clothing
has sales
appeal plus ...



For TUFEDGE makes your beef look as good on the hook as it did on the hoof. TUFEDGE gives you better, faster application with smooth, close-fitting edges at all times.

Only genuine TUFEDGE is available in these two convenient widths, identified by the exclusive blue stripes... single stripe, the 36" width; double stripes, the 40" width.

And TUFEDGE saves you money...outlasting all other beef shrouds 5 to 1. Its strong, highly absorbent weave guarantees snug fit after countless washings.

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CLEVELAND, OHIO

CANADIAN DISTRIBUTORS: ELCO LTD., TORONTO

Prime idea for meat men!

Your job is different! Because it requires a specially constructed truck, we think you'll be interested in an International.

These trucks are engineered for your specific job. They're built to last, to give you extra years of economical, efficient service. Drivers like the way they handle, and they appreciate the comfort of International's famous Comfo-Vision Cab.

If you want to solve all your trucking problems at once, here's a "prime" idea. See your International Dealer or Branch *right away!*

INTERNATIONAL HARVESTER COMPANY • CHICAGO

Look for these International exclusives:

- International valve-in-head truck engines are rugged, packed with extra power. Engineered to save you plenty on operating and maintenance costs.
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- Super-steering system—more positive control. Wider front axles make possible full 37° turning angle for greater maneuverability.
- 115 basic models... everything from ½-ton pickups to 70,000 lb. GVW ratings. Chassis adaptable to a wide variety of body types.



International Harvester Builds McCormick Farm Equipment and Farmall Tractors...Motor Trucks...Industrial Power...Refrigerators and Freezers



Better roads mean a better America

INTERNATIONAL INTERNATIONAL TRUCKS "Standard of the Highway"



International L-160 series offers 130 to 172-in. wheelbases, GVW ratings from 14,000 to 16,500 lbs., and a wide variety of bodies.

Make These **4-WAY SALT SAVINGS**

yours with the help of International Salt Company's Industrial Engineers

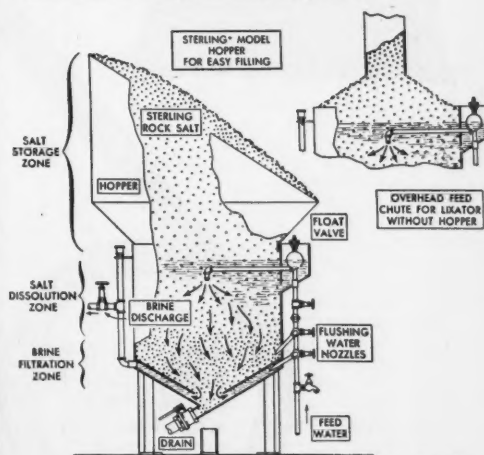
- 1. SAVINGS ON STORAGE** by engineering the most efficient and compact salt storage system to fit your situation.
- 2. SAVINGS IN LABOR** by reducing effort and supervision involved in salt or brine handling.
- 3. SAVINGS ON WASTE** through accurate salt measurement and ending of spillage and spoilage.
- 4. SAVINGS IN USE.** Research and field work with hundreds of industries in many fields equip International to show you how best to use salt in product processing—and for product improvement, too.



LIXATOR*—A NOTABLE EXAMPLE

The Lixator is one of International's outstanding advances in salt technology. Utilizing Sterling Rock Salt, the Lixate principle of self-filtration, invented and developed exclusively by the International Salt Company, provides a steady flow of pure, clean, fully saturated brine.

No handling or attention is required beyond the hopper-loading stage—gravity does all the work. The Lixate Process is adaptable to almost numberless industrial requirements, large or small.



* Reg. U. S. Pat. Off.

No matter what type of salt your company uses, you will find it profitable to consult with International Salt Company's Industrial Division.

As part of International's service to industry, this experienced organization will acquaint you with latest advances in salt use in your field. And can advise you on all aspects of salt storage and handling, brine making, and salt and brine uses.

Here you'll find four ways to save money—and very probably, *important* money.

Qualified on all Counts

International Salt Company's Industrial Division is endowed with the experience of one of America's largest salt producers. This company produces all types of salt and operates from strategically located mines and refineries.

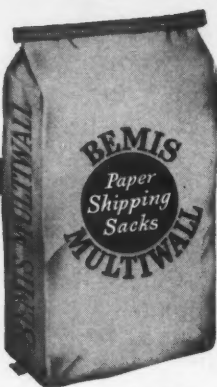
As supplier to all industry, it is constantly in touch with salt developments in all fields. Many such developments, in fact, have been pioneered by International Salt Company.

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Bleaching Cloth

full line
from a
single
source

BEMIS Bags for Meat Industry Products

As America's No. 1 Bag Maker, Bemis naturally fills many packaging needs of the meat packing business. Besides the products shown here, Bemis supplies you with lard press cloths, parchment-lined bags, ready-to-serve meat bags, cellophane bags, roll duck, cheese-cloth, beef or neck wipes, scale covers, inside truck covers and delivery truck covers.

All Bemis products are *good products*...and you benefit still further when you can get all of your needs from a single source.

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Have You Tried First Spice?

"Never found a better binder than **TIETOLIN** in 50 years of sausage-making. **TIETOLIN** gives me smoother texture, more uniformity every time."

Improve Your Product,
Increase Sales

"Before I tried **SEASOLIN** my meat loaves always looked pale and floury. **SEASOLIN** has improved their color remarkably."

"I use **FIRST SPICE SEASONINGS** because my customers prefer their flavor. You just can't beat their natural spice seasonings for Bouillon **FRANKFURTER**, **BOLOGNA**, **PORK SAUSAGE**, **Braunschweiger LIVERWURST**."

FIRST SPICE

Mixing Company, Inc.

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In Canada: First Spice Mixing Co., Limited, 1116 Bloor Street W., Toronto, Ont., Canada

TIETOLIN*

THE PERFECT ALBUMIN BINDER



SEASOLIN

COLOR-FRESHNESS RETAINER



SPICES SEASONINGS



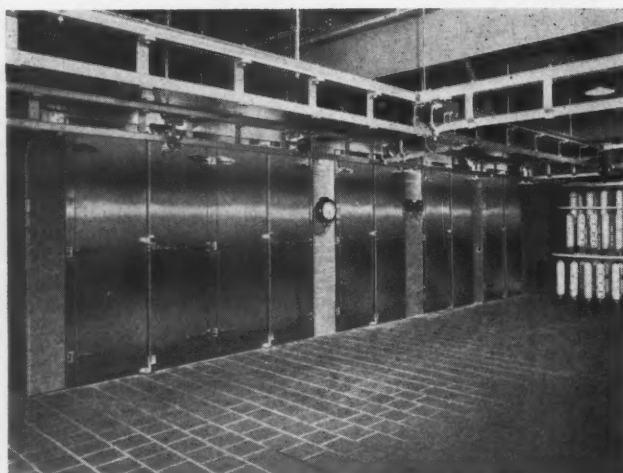
SEASOLIN*—New color retainer employs unique principle that restrains color-destroying bacteria. **SEASOLIN** helps keep meat products fresher, preserve color longer, inside and on the cut. Increases shelf life.

TIETOLIN*—This perfect albumin binder is used by more sausage makers than any other binder. **TIETOLIN** binds fat of all kinds, prevents excessive fat separation, reduces loss by shrinkage, increases yield. **TIETOLIN** helps eliminate air pockets, absorbs and holds moisture; contains no cereal, no gum, no starch.

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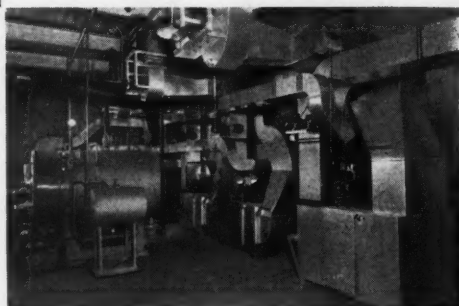
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Over twenty years of manufacturing "know how" plus over twenty years of constantly improving our service guarantees you all the advantages of better color, lower costs, higher yields and utmost sanitation. ATMOS, the "Original" Air Conditioned Smokehouse, is designed and engineered to meet today's demands as well as tomorrow's requirements! All ATMOS Equipment is built in our own plant and installed and serviced by our National Service Organization.



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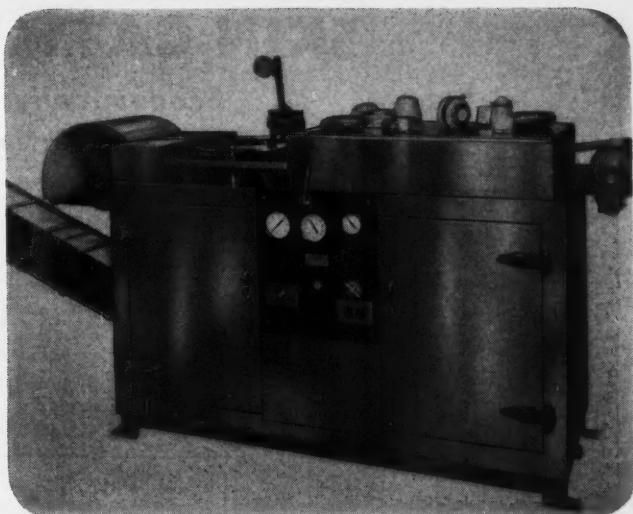
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Presents
 the new
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**FOR TIGHT CONTOUR WRAPPING OF MEATS
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The "Stretchrap" is the latest addition to the well known Stokes & Smith packaging machines, designed to give a tight, sanitary contour wrapping to such products as:

Meats
 Cheeses
 Fruits

Vegetables
 Soap
 Toys

You can wrap a bar of soap—a bunch of carrots—a piece of Liverwurst . . . hard or soft products, round, square or irregular in shape on the "Stretchrap"—the result is a smart looking, eye appealing package that protects yet shows the natural quality of the products.

The Pliofilm is fed from a roll and heated to the desired temperature and is then stretched by being drawn into the receiving pocket by vacuum.

One operator places the items to be packaged in the "Stretchrap" Machine. It automatically forms a tight, contour wrap around the article at speeds up to 16 packages per minute.

Foods stay fresh longer.
Reduces shrinkage of produce.
Product stays clean and sanitary.
Reduces loss from spoilage and handling.
Uses less film as the film is stretched after being heated.
Costs as little as a penny a package.
Pays for itself quickly.

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Now . . . a really effective way to remove skins, hot or cold, without damage to skin or carcass! This *Electric Cattle and Calf Skinning Knife* speeds up the skinning operation of both skilled and unskilled hide men . . . boosts yields as much as 15% . . . quickly pays for itself! *Completely safe!* Weighs only 16 ounces exclusive of 1/6 hp motor and flexible cable. *Industry approved . . . job-proven!*

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Brilliantly polished surface slips meat quickly and easily. Light in weight . . . built for heavy duty. Last word in sanitation. Easy to clean with hot water spray. Guaranteed not to scratch stuffer cylinder walls! Scoop or spade type with "T" or "D" handles. Write for prices!

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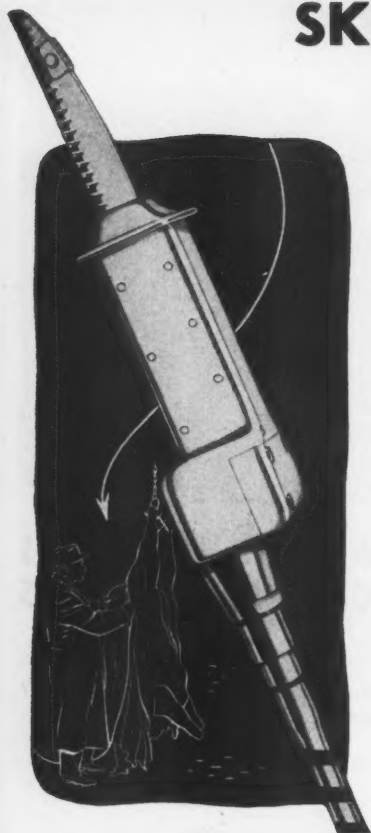
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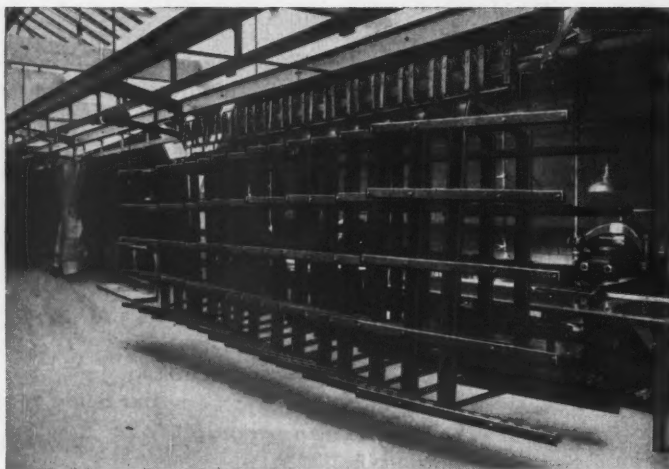
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FILL IN YOUR SPECIFICATIONS AND MAIL . . . TODAY!

No. Stations _____

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☐ Round Notches

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PROMPT DELIVERY!

SAVE SPACE!

Illustration shows 15 cages stored on 15 feet of rail. Sturdily built. No moving parts to get out of order. 4 Station Cages, complete with Trolleys \$48.50 each F.O.B. Factory

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B & D MACHINES mean High-Speed, Precision Cutting . . . even to the inexperienced operator!

All B & D Machines are expertly designed for easy use!

B&D

leads the field!



The famous B & D line-up of dependable, packer-approved Machines includes:

CATTLE DEHORNING SAW

A Handy portable saw that permits frequent, speedy sterilization.

UTILITY SAW

Particularly recommended for precise cutting of veal carcasses.

PRIMAL CUT SAW

A mass-production tool for breaking down carcasses while on the rail or cutting table.

BEEF RIB BLOCKER

Saws rib bones in beef carcasses swiftly and accurately. Light weight, easy-to-use.

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Produces perfect cuts every time . . . no bone splinters . . . saves time.

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Enables the operator to achieve a perfect cut in 8 to 10 seconds.

HOG BACKBONE MARKER

Equipped with 8-inch blade for marking hogs to secure perfectly split carcasses.

PORK SCRIBE SAW

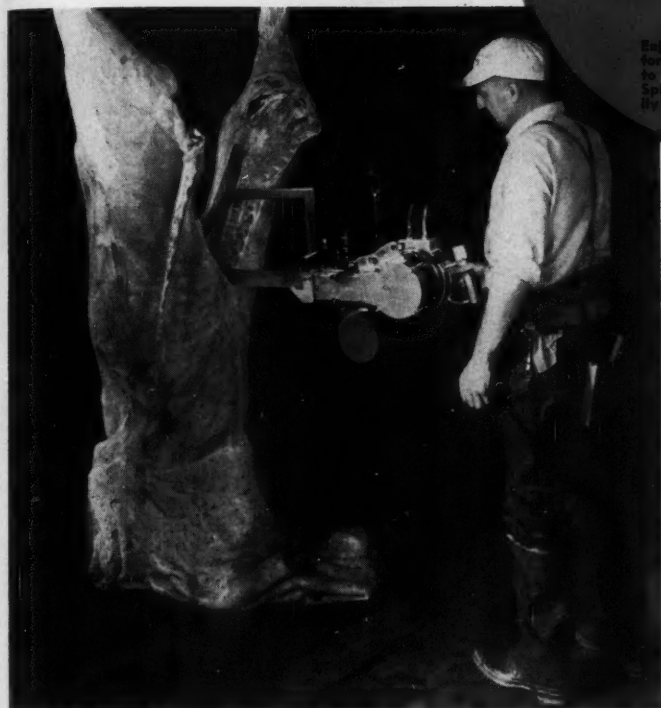
Improves the sales appeal of pork and belly products.

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Eliminates ragged edges, bone splinters and costly miscuts. Guarantees a perfect scribe every time.

BEEF BREASTBONE OPENER

Two models for your greater convenience . . . brings new speed and precision to the rail and the pritch plate.



The enthusiastic endorsement of B & D machines by leading packers everywhere attests to their real superiority. The wide-spread and ever-growing acceptance of B & D Machines spurs us on to even greater achievements aimed at increasing packer yields and processing meat faster, better and at lowered cost.

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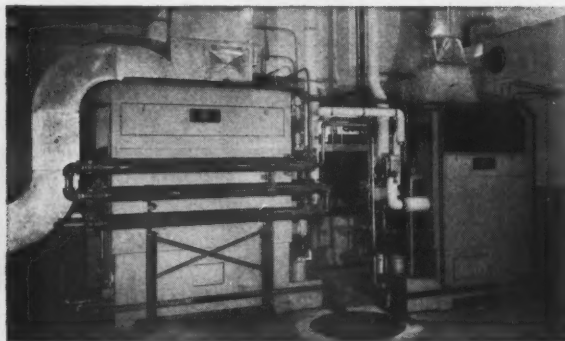


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Niagara's HYGROL DRIES AIR BEST

with exact moisture content



NIAGARA CONTROLLED HUMIDITY AIR CONDITIONING

This method removes moisture from air by contact with a liquid in a small spray chamber. The liquid spray contact temperature and the absorbent concentration, factors that are easily and positively controlled, determine exactly the amount of moisture remaining in the leaving air. Heating or cooling is done as a separate function.

The Niagara's Controlled Humidity Method using HYGROL moisture-absorbent liquid is

Best and most effective because . . . it removes moisture as a separate function from cooling or heating and so gives a precise result constantly and always. Niagara machines using liquid contact means of drying air have given over 20 years of service.

Most reliable because . . . the absorbent is continuously re-concentrated automatically. No moisture-sensitive instruments are required to control your conditions.

Most flexible because . . . you can obtain any condition at will and hold it as long as you wish in either continuous production, testing or storage.

Easiest to take care of because . . . the apparatus is simple, parts are accessible, controls are trustworthy.

Most compact, taking less space for installation.

Inexpensive to operate because . . . no re-heat is needed to obtain the relative humidity you wish in normal temperature ranges and frequently no refrigeration is used to remove moisture.

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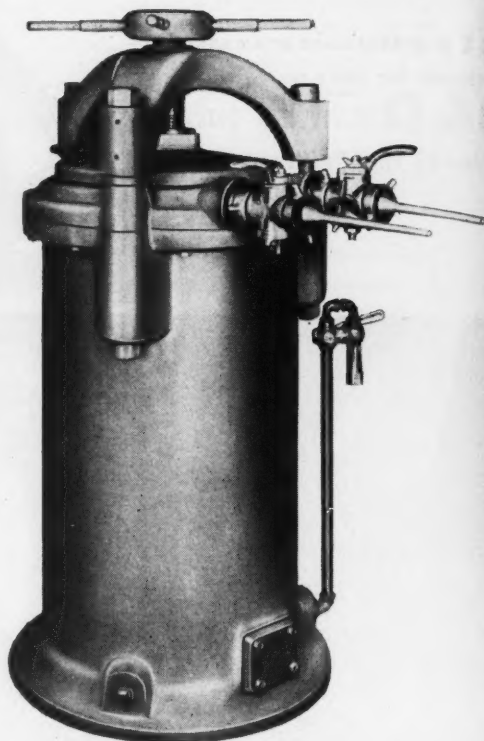
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NOTE THESE IMPORTANT FEATURES:

- Capacity 400 pounds
- Leak-proof piston prevents loss of pressure
- Equipped with stainless outlets and tubes, air control valve and muffler
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- Has air intake on either side

**For Low Cost Production Year In and Year Out,
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We make stuffers of every size: 55 lb. to 500 lb.

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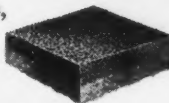
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**BLUE ●
TEMPER**

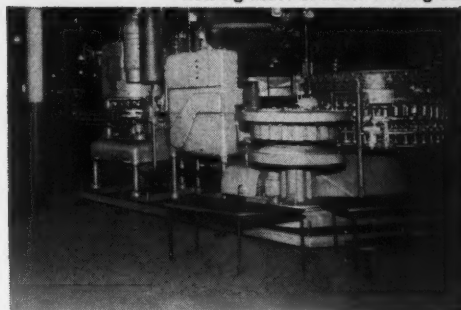
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NP-2

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Apply with brush or spray-gun. Unequalled protection for equipment and metal surfaces subject to extreme acid and alkali conditions. Costs less than 4c per square foot. Write us for information.

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GOES ON
WET OR DRY
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BEAUTIFIES
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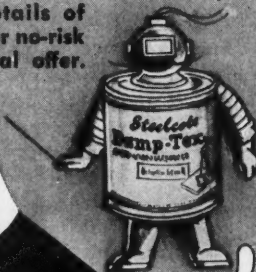
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Patent Pending

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More and more progressive retailers are putting their meat departments on a self-service basis. Now meat has joined the ranks of food items that must be equipped to sell themselves.

This is a challenge to meat packers to make the most of this trend. Are your packages designed for self-service? Colorfully printed Cellophane pack-

ages attract attention, put an appetizing picture in the shopper's mind . . . make impulse sales.

Your Du Pont representative and the converters of Cellophane will be glad to work with you in developing packages for self-service marketing. E. I. du Pont de Nemours & Co. (Inc.), Film Dept., Wilmington 98, Del.

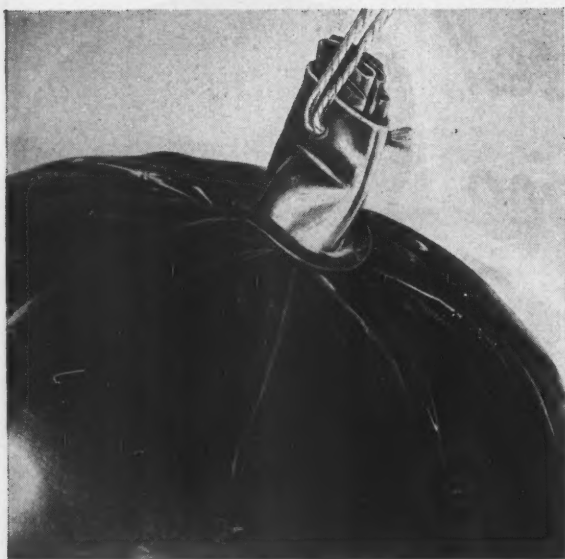
Du Pont Cellophane

Shows what it Protects—Protects what it Shows



150th Anniversary

Better Things for Better Living
... through Chemistry



SAVE MATERIAL and LABOR COSTS

with Fas-Tie

**the ideal sausage fastener
for packers and processors**

Fas-Tie is reducing material and labor costs for sausage packers from coast to coast. This light, strong aluminum fastener actually cuts casing costs 10 to 20%! . . . by making a short end closure. Increases production . . . Fas-Tie operator fastens 400 casings an hour. Saves string and stockinettes.

The inexpensive Fas-Tie machine pleats the casing . . . crimps the pleated end with the Fas-Tie fastener.

Send for free brochure today.



Fas-Tie cuts casing costs 10 to 20%.



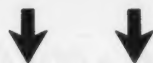
Saves string and stockinettes.

Hercules FASTENERS, INC.

1140-1146 E. JERSEY ST., ELIZABETH 4, N. J.



Make



MIDWEST

your TEXTILE

Buying Center!

NOW! A shroud cloth with 4 inch reinforced pinning edge for the price of regular shrouds . . .

"BLEACH-RITE"

is the finest shroud on the market today. It is made from No. 1 clean cotton—does not contain any dirty specks. This special reinforced pinning edge assures long life and prevents the pins from tearing the shroud. A trial in your plant will convince you that a better shroud cannot be had at any price.

- SHROUD CLOTHS
- BEEF STOCKINETTES
- HAM STOCKINETTES
- BOLOGNA STOCKINETTES
- FRANK STOCKINETTES
- BEEF TUBINGS
- HAM TUBINGS
- BUTT TUBINGS
- LARD PRESSCLOTHS
- CATTLE WIPE
- PACKERS CHEESECLOTH

Whatever your textile requirement, you'll find just the item you need . . . stocked for immediate shipment . . . and attractively priced . . . at MIDWEST! The nationally famous WESTEX BRAND is backed by sound practical experience in quality-covering the nation's fresh and smoked meats

Write, wire or phone today for free full-size working samples and list of agreeable prices!



Midwest Textiles, Inc.

1906 Western Avenue

Cincinnati 14, Ohio

Garfield 6549

Controlled Pressure

means

better

hams!

THE ADJUSTABLE RATCHETS on Adelmann Ham Boilers permit regulation of pressure necessary to close boned cavities. Beyond this point shrinkage is excessive—costly in loss of weight and flavor. Repressing after cooking, to take up slack, is also possible, and good practice to insure a firm, solid product.

Elliptical springs on Adelmann Ham Boilers distribute pressure over a wide area—prevent cover tilting. Simplicity of operation, easy cleaning, long life—all contribute to successful results. Hams produced in Adelmann Ham Boilers really sell!



Over 100 sizes, 10 different shapes. All in Cast Aluminum, some in Stainless Steel. Ask for booklet showing entire line, and containing valuable ham boiling hints.

HAM BOILER Corporation

Office and Factory, PORT CHESTER, N. Y.

ADELMANN — "The Kind Your Ham Makers Prefer"

New

**SAVES
WATER
and
CUTS
MAINTENANCE COSTS . . .**

Illustrations show two views of a 35 ton Condenser Tower prior to partial disassembly for shipment.



**Vogt
CONDENSER
TOWER**
FOR CONDENSING
REFRIGERANTS



SINGLE RESPONSIBILITY:

Vogt, leading builder of refrigeration condensers, assumes responsibility for engineering the unit. Only one purchase order needed.

SHOP FITTED:

To cut down field assembly labor. Requires no cutting or fitting of pipe.

Designed for today's water conservation requirements, and to keep refrigeration costs low, the *new* Vogt Condenser Tower meets the need for a proven, readily cleanable condensing unit.

The Vogt Condenser Tower consists of a multipass straight tube condenser, a receiver, an oil trap, a cooling tower, and a water pump. Removable cast iron heads permit easy cleaning of the condenser tubes.

Water costs are extremely low since the cooling water is recirculated continuously and requires only a small amount of makeup to replace losses due to windage and evaporation.

Condenser Tower units are available in capacities ranging from 5 to 50 tons refrigeration. Additional information will be furnished upon request.

HENRY VOGT MACHINE CO., Louisville 10, Kentucky

BRANCH OFFICES: NEW YORK, PHILADELPHIA, CLEVELAND, CHICAGO, ST. LOUIS, DALLAS, CHARLESTON, W. VA.

As an
arrow
indicates
direction

Photo taken at
FORST Packing Co.



"Arksafe"
**CRINKLED KRAFT
MEAT
COVERS
indicate
quality**

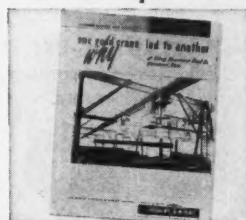
For details write Dept. NP-1

ARKELL SAFETY BAG COMPANY
10 EAST 40th STREET 6345 WEST 65th STREET
NEW YORK 16, N. Y. CHICAGO 38, ILLINOIS
Plants: Chicago, Ill., and Newport News, Va.
Representatives in principal cities

follow the line of least resistance

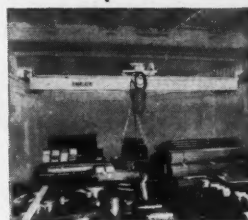
TAKE IT UP WITH ROBBINS & MYERS

Kilroy Structural Steel use 17 R & M hoists, and have on order two R & M cranes to help them handle more steel more efficiently. Write for the Kilroy report—it may be the answer to your problem.



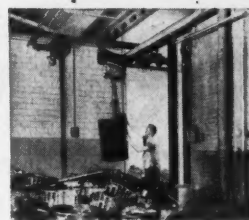
TAKE IT UP WITH ROBBINS & MYERS

Modern Tool & Die Co. find their nine R & M hoists and two R & M cranes on a systematic overhead network handle stock and product transport without sacrifice of floorspace, and give their men effortless aid on assembly work. Write for your copy—ready soon.



TAKE IT UP WITH ROBBINS & MYERS

Automatic Die & Products Co. reduce time, labor, and maintenance costs with an R & M crane unloading incoming steel, and a Trambeam mounted hoist moving scrap from their plant. Want to handle greater tonnage in less time? Don't miss this report—ready soon.



TAKE IT UP WITH ROBBINS & MYERS

R&M "OVERHEAD HANDLING CASE STUDIES" cost you nothing. Use coupon. R&M representatives will gladly help adapt them to your needs.

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POSITION _____
FIRM _____
ADDRESS _____
CITY _____ STATE _____

TAKE IT UP WITH

ROBBINS & MYERS INC

HOIST AND CRANE DIVISION, SPRINGFIELD 99, OHIO

CANNON

the money-saving, eye-appeal line! High quality, uniform, completely dependable.

SWEET DICED

READY-TO-USE, NO CUTTING, no brine. Packed in convenient #10 tins. No spoilage, no left-overs.

RED

bright, firm, thick-walled. Cannon's own California Wonder sweet pepper strain — crisp pieces — similar to the fresh vegetable.

PEPPERS

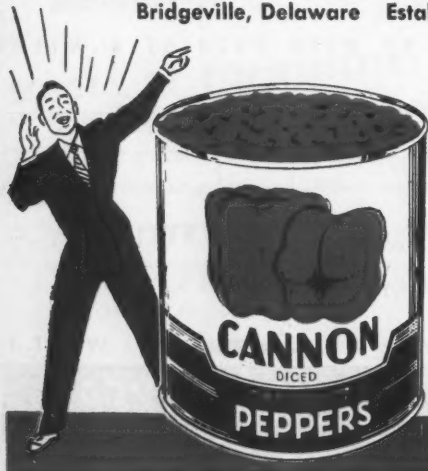
more — more for your money. Up to 10 ounces more per can, three pounds more peppers per case. Extra heavy pack (Pat. No. 2,587,466).

ORDER TODAY

Write to your nearest distributor or direct to

H. P. CANNON & SON, INC.

Bridgeville, Delaware Established 1881

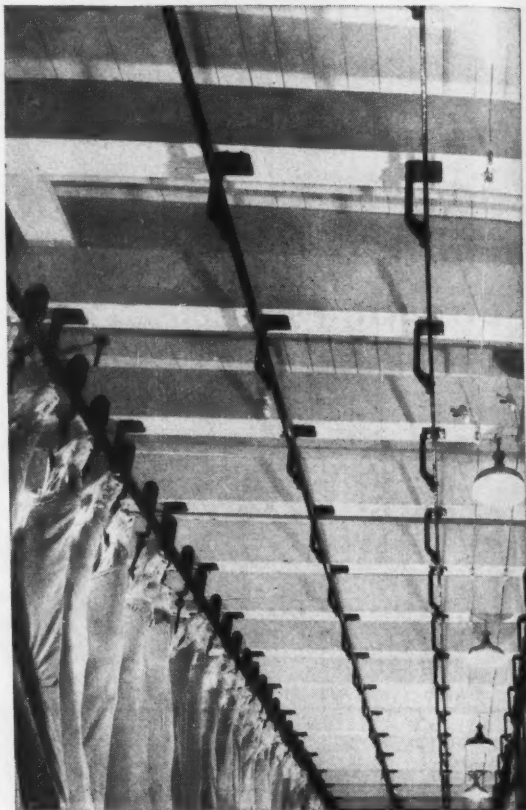


CANNON BRAND



FOOD FOR THOUGHT

Sanitation is Paramount!



Typical of thousands who use the following products to combat the destructive action of vapors, condensation, corrosion, acid, fungus and mold.

Walls and ceilings —

Rubbertex Base Coat
Finish coat Masterkote Sanitile White

Mastic coated insulation surfaces —

Bleed Tite White Sealer
Finish coat Masterkote Sanitile White

Machinery and equipment —

Knox Rust Chromolox base coat
Finish coat Eisen Heiss White or Color

The above come ready to apply by brush or spray.

In addition to the sanitary feature, it saves costly repainting jobs.

THE MASTER MECHANICS CO.

"35 years' serving industry, for the utmost in sanitation and preservation"

CLEVELAND 13, OHIO, U.S.A.

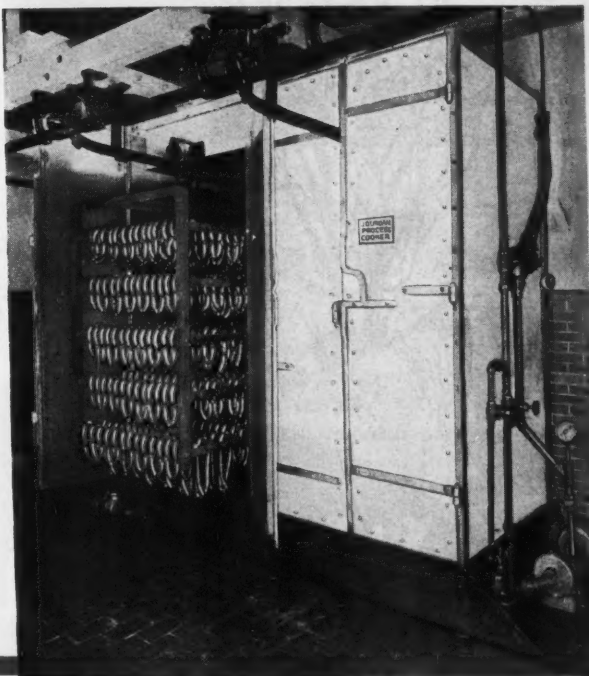
Jourdan

**cooks a full cage
directly on the rail!**



Jourdan

**eliminates burst, broken
and tangled sausage!**



JOURDAN PROCESS COOKER

HOT WATER COOKER

Cooks with or without color. Loaded cages or trucks are rolled right in from the smokehouse . . . then you have uniformly cooked sausage which is both eye-appealing and sales-compelling.

VAPOR COOKER

Another JOURDAN triumph! Especially designed and equipped to vaporize steam under automatic control. Supersedes the old-fashioned steam box . . . accomplishes an outstanding cooking job.

EASY TO OPERATE

All types and models of JOURDAN Cookers are very simple to operate. Any handy-man can set up because the parts are match-marked.

STANDARD OR SPECIAL MODELS

Three standard cabinet models, the *single*, the *double* and the *twin* fill most needs adequately. Special models can be built to your individual specifications . . . first send for dimension chart to use when submitting required data.

*** Investigate the JOURDAN today
. . . send for detailed story!**

By cooking directly on the rail, the JOURDAN Process Cooker eliminates handling, saves costly labor, cooks faster, better and more economically, *applies color as it cooks*, and assures a cleaner, improved product with *cooked-in* sales appeal! JOURDAN features 4 types of construction to meet the requirements and the budgets of the large, small and medium-sized packer. The *Regular*, *Galv. & SS Trim*, *Semi-Stainless* and the *Deluxe Solid Stainless* JOURDANS all accomplish the same outstanding results that has made the Jourdan Method the standard practice for the meat industry.

Jourdan

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CHICAGO 8, ILLINOIS

Telephone CAnal 6-3846



West Carrollton GENUINE VEGETABLE Parchment

Gives Good Protection, too!

Fine foods deserve the *best* flavor-protection that packaging can provide. That is why so many packers of moist foods use so much West Carrollton Genuine Vegetable Parchment, year after year—thereby winning quicker and more lasting

public acceptance. This parchment is **ODORLESS, TASTELESS, GREASE-RESISTANT, INSOLUBLE** and is **STRONG**, too, wet or dry. We can print it for you in one or more attractive colors (special inks)—right to your specifications.

DRY WAXED PARCHMENT

BUTTER WRAPPERS
BUTTER TUB LINERS
& CIRCLES
BUTTER BOX LINERS



LARD CARTON LINERS

MILK & ICE CREAM
CAN TOPS
SLICED BACON WRAPPERS
FISH FILLET WRAPPERS
& INSERTS



VEGETABLE SHORTENING

CARTON LINERS
CELERY WRAPPERS
OLEOMARGARINE
WRAPPERS
MEAT WRAPPERS



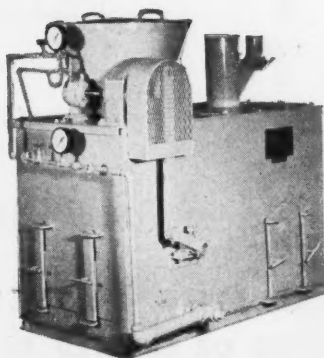
LINERS FOR MEAT TINS

POULTRY WRAPPERS
CHEESE WRAPPERS
TAMALE WRAPPERS
MANY OTHERS

WEST CARROLLTON PARCHMENT COMPANY • WEST CARROLLTON, OHIO



★
At left—Dry-Sys Smoke House, loaded with "Franks" ready for smoking.
Below—Dry-Sys Mechanical Smoke Generator that will do the job.



What Every Packer Should Know...

about SMOKEHOUSES:

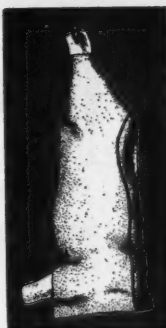
They should possess these important features:
Smoke all provision and sausage products.
Automatic control of temperature and humidity.
Minimum shrinkage of products.
Uniform performance the year round.
A thorough circulation of air, well distributed.
Tight, insulated panel housing on steel framing.
Easily cleaned, economically operated, trouble free.
Designed for you, to fit your plant conditions.

about SMOKE GENERATORS:

They should possess these important features:
Heavy steel plate housing, well insulated thruout.
Cyclone type fly-ash collector, leaving smoke clean.
Plenty of cool, dry smoke, retaining all flavoring elements.
Large sawdust capacity, mechanically agitated.
Controlled, forced air feed to combustion area.
Only compressed air required to operate—no wiring.
Easily cleaned grate area—easy sawdust removal.
Drawer type ash receiver, simple to empty.
Shipped complete, ready to go to work.

DRYING SYSTEMS, INC.

Engineers • Contractors • Manufacturers
1815 FOSTER AVENUE • CHICAGO 40, ILLINOIS
Phone: ARdmore 1-9100



PIN-TITE

REG. U.S. PAT. OFF.

Extra Strong SHROUD CLOTH

PIN-TITE is the best shroud cloth for you!

Outlasts ordinary shrouds many times over.

Pulls tight without tearing.

Special weave permits complete aeration.

Bleaches white and marbelizes.

The bold red stripe identifies the Extra Strong pinning edge. Save time—Save money—Use PIN-TITE. Mail the coupon today for your free working sample.

FORM-BEST

REG. U.S. PAT. OFF.

Full Length STOCKINETTES



FORM-BEST forms your hams better... absorbs less... boasts an absolute minimum of shrinkage. This is the stockinette you've been hearing about... the full length stockinette that is stronger and more elastic... FORM-BEST stockinettes can be applied in half the time—easily and quickly. Try them today. A trial will convince you... use the coupon below for free samples and prices.

THE CINCINNATI COTTON PRODUCTS CO.

Colerain, Alfred and Cook Streets
CINCINNATI 14, OHIO, U.S.A.

Gentlemen: Please send free samples as indicated below:

- ☐ PIN-TITE SHROUD CLOTH, Size _____
☐ FORM-BEST STOCKINETTE, Size _____

NAME _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

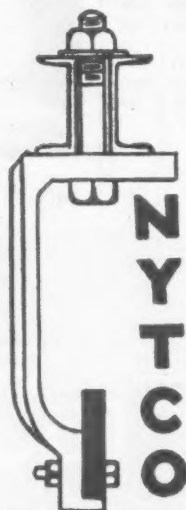
THE CINCINNATI COTTON PRODUCTS CO.

CINCINNATI 14, OHIO, U. S. A.

NEW YORK TRAMRAIL CO. INC.

TRY OUR BALL BEARING WHEEL TROLLEYS

Meat Track Systems
Track Scales
Meat Hooks and Trolleys
Switches—Shelving
Monorail Systems
Electric and Chain Hoists
Cranes—Trolleys



ME Irose 5-1686

*Meat Handling
Equipment for the
Packinghouse
Provision Plant
Wholesale Butcher
Retail Market
Canning Factory*

345-349 RIDER AVE.

NEW YORK 51, N. Y.

OVERHEAD MEAT TRACKING SYSTEMS
CAN BE FURNISHED EITHER FABRICATED OR ERECTED AS REQUIRED

Protect your quality meats in transit...
Ship them the Sure, SAFEWAY!



SAFEWAY Terminals are strategically located in the heart of the Middle-west: Main Office at Chicago. Western Terminals: St. Louis, Kansas City, Council Bluffs, Fort Dodge, St. Paul. Eastern Terminals: Boston, North Bergen, Jersey City, Buffalo and Cleveland.

Ship the SAFEWAY . . . and make sure your quality meats and meat products arrive at their destination in tip-top condition! All SAFEWAY equipment is designed especially to meet the particular needs of the Perishable Food Industry . . . your assurance that your products will enjoy the best possible protection! Frequent truck check-in stations keep every SAFEWAY unit pin-pointed between point of loading and destination to permit shipment diversions. Instant teletype communication between all terminals is another SAFEWAY feature that helps keep your products on the move . . . on schedule . . . and SAFE ON ARRIVAL!

SAFEWAY TRUCK LINES, INC.

13 N. Nineteenth Street, Fort Dodge, Iowa • Main Office: 4125 S. Emerald Ave., Chicago 9, Illinois
Boston • Jersey City • Buffalo • Cleveland • Fort Dodge • Omaha • St. Louis • Kansas City

Now available to the Meat Packing Industry...

CARBON DIOXIDE GAS!

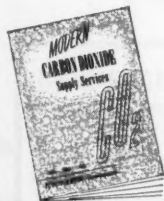


Meat Packers can take immediate advantage of new uses developed for Carbon dioxide gas in packing plants!

Pure Carbonic Company has geared its nationwide distribution network to the needs of the meat packing industry . . . and can readily supply liquid or solid CO₂ (dry ice) in any quantity — from pounds to tons.

Supply reservoirs? Pureco engineers will advise you concerning the type best suited to your needs . . . and will further assist you in setting up appropriate units for piping CO₂ in gaseous form to any location in your plant.

Consult your classified directory for the location of your nearest Pureco office!



Write for free booklet!



PURE CARBONIC COMPANY

A DIVISION OF AIR REDUCTION COMPANY, INCORPORATED

General Offices: 60 East 42nd Street, New York 17, N. Y.

at the frontiers of progress you'll find



**Reduce B. O. D.
Recover Waste Grease**

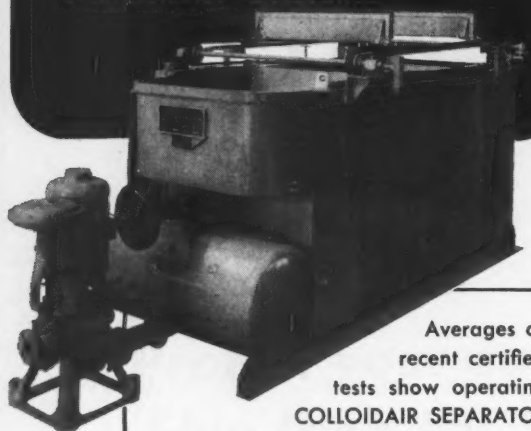
**Make your waste disposal
problem an asset with**

BULKLEY-DUNTON

colloidair

SEPARATORS

**COLLOIDAIR TRICKLING FILTERS
AND COMPLETE WASTE WATER
TREATMENT SYSTEMS**



Averages of
recent certified
tests show operating
COLLOIDAIR SEPARATOR
installations removing
90.1 % grease
70.8 % B. O. D.

from packing plant waste waters.

Ask Bulkley-Dunton about installation of
your own complete waste treatment plant to

- ✓ **Meet city and state pollution requirements**
- ✓ **Return saleable grease**
- ✓ **Eliminate or reduce sewer charges**
- ✓ **Enable reuse of water in selected circuits**
- ✓ **Replace sewer charges with profits**

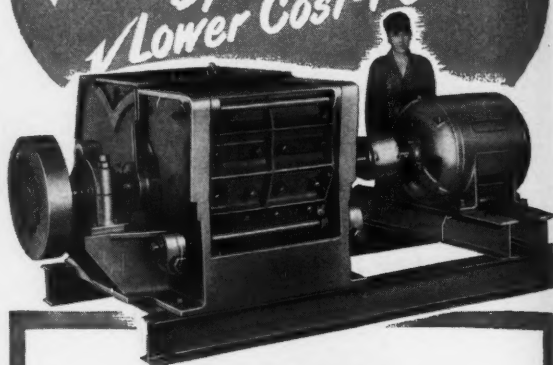
Write today for complete details or
consult with our nearest field engineer.

**BULKLEY-DUNTON
PROCESSES, INC.**

295 Madison Avenue • New York 17, N. Y.



**✓ Maximum
Grease Recovery!
✓ Better Quality
By-Products!
✓ Lower Cost-Per-Ton!**



WILLIAMS "NO-NIFE" HOGS & HAMMER MILLS

Williams' wide experience in the recommendation of correct equipment for more efficient grinding and crushing has invariably increased output and decreased costs for hundreds of packers and processors. Here are a few benefits Williams Equipment can give you:

GREATER GREASE RECOVERY by properly preparing green bones, carcasses, entrails, meat scraps, etc., without the use of excessive heat and regardless of extraction method.

CONSTANT BY-PRODUCT UNIFORMITY by correctly grinding and handling of dry bones, cracklings or tankage, and glue stock.

MORE EFFICIENT OPERATION — The reduction of dry materials down to 8 mesh — or the grinding to small size of materials with high grease content is done more quickly, easily and economically — in one operation!

There are many other profitable advantages provided by Williams' know-how and equipment. It's good business to discuss your present grinding and crushing methods with Williams.

Write Today!

WILLIAMS COMPLETE LINE ALSO INCLUDES:

- COMPLETE "Packaged" PLANTS engineered to deliver finished saleable by-products
- VIBRATING SCREENS
- STEEL BINS
- BUCKET ELEVATORS AND CONVEYORS

WILLIAMS PATENT CRUSHER & PULVERIZER CO.
2708 NORTH NINTH STREET ST. LOUIS 6, MO.

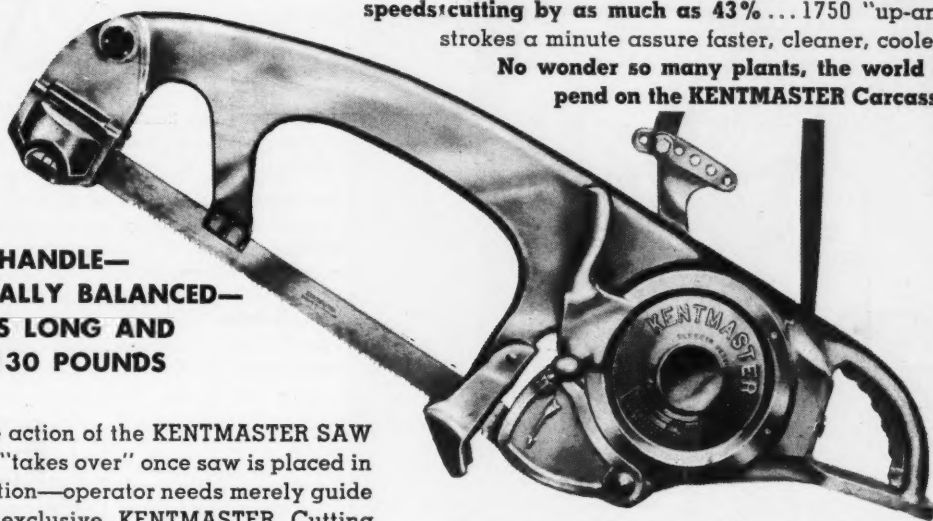
WILLIAMS
CRUSHERS GRINDERS SHREDDERS
OLDEST AND LARGEST MANUFACTURER OF HAMMER MILLS IN THE WORLD

CARCASS SPLITTING PROBLEM GOT YOU "BUFFALOED"?



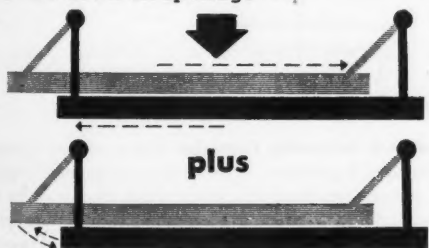
TURN THE JOB OVER TO THE NEW **KENTMASTER**

You'll have no problems when you install the **KENTMASTER** Carcass Splitter...exclusive Kentmaster "Cleaver-like" action speeds cutting by as much as 43% ... 1750 "up-and-down" strokes a minute assure faster, cleaner, cooler cutting. No wonder so many plants, the world over, depend on the **KENTMASTER** Carcass Splitter.



**EASY TO HANDLE—
DYNAMICALLY BALANCED—
58 INCHES LONG AND
WEIGHS 130 POUNDS**

Note double action of the **KENTMASTER SAW** ... actually "takes over" once saw is placed in cutting position—operator needs merely guide the saw...exclusive **KENTMASTER** Cutting action increases worker efficiency, speeds output, cuts down on spoilage...



These excerpts from a few of the many unsolicited letters we receive tell you that the **KENTMASTER** does a better job...

"We are well pleased with the performance of the Saw and would not take a million dollars for it now."

Texas

"The Saw is very efficient and fast cutting with very little effort put to it. If anyone should ask our opinion of the Saw we would recommend it to anyone."

Wisconsin

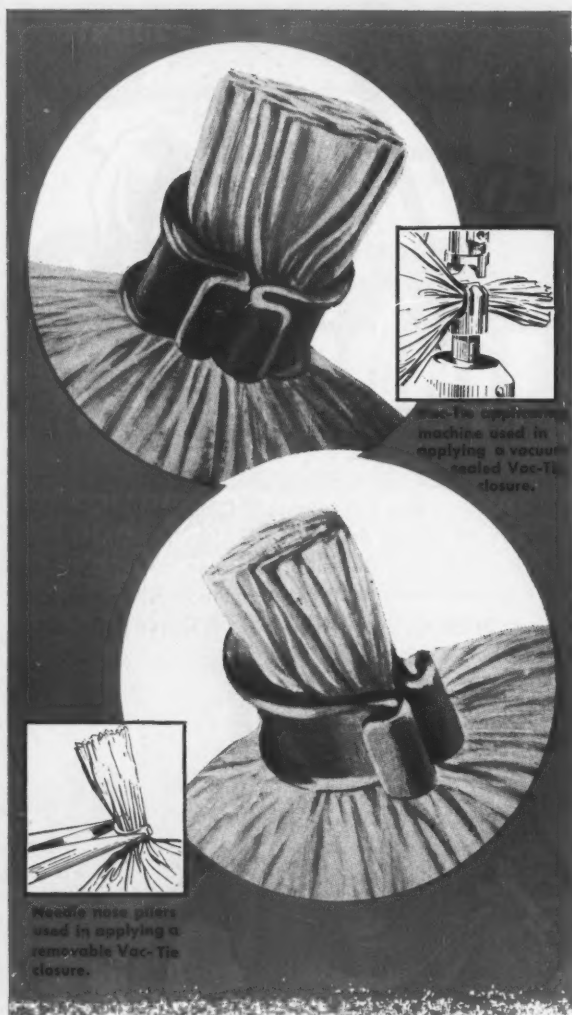
"It is giving excellent service. The Saw is fast, easy to operate and trouble free. We will recommend it to anyone as being the best obtainable, since we have tried three other beef splitters before obtaining our Kentmaster."

North Dakota

You too can profit from the economies and advantages of a Kentmaster Installation—write today for name of nearest distributor and FREE copy of brochure on saw operation and suspension—no obligation.

KENTMASTER MANUFACTURING COMPANY, INC.

3000 HYDE PARK BOULEVARD • LOS ANGELES 43, CALIFORNIA



Vac-Tie the adaptable closure for plastic bags

No matter what your problems in plastic bag sealing... Vac-Tie offers the economical solution. These strong, light aluminum fasteners can be applied with or without a Vac-Tie applying machine to provide a safe, neat seal...guaranteed not to stretch, break, loosen, or corrode.

Apply a Vac-Tie fastener with needle nose pliers to solve super market pre-packaging problems where the customer wants to reuse the plastic bag. Or use a Vac-Tie applying machine (three models to choose from) to insure a positive hermetic seal where Vac-Tie is used for vacuumizing frozen foods and smoked meats.

Remember: If you are using plastic bags to package food, Vac-Tie is designed for you. Investigate its tremendous potential now. Send for free color brochure and complete data.

Vac-Tie FASTENERS, INC.



1140-1146 E. JERSEY ST., ELIZABETH 4, N. J.

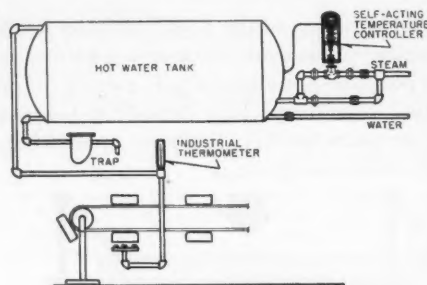
DEGREES are DOLLARS

When you're heating water for sterilizing it's easy to burn away dollars by keeping it too hot.



With Taylor Controls on your heating system, you can be sure your water is always hot enough to meet requirements, but you won't spend extra money getting it hotter than necessary.

The Hot Water System shown below is particularly designed for Viscera Sterilizing Pans, but the basic system is applicable to practically any hot water supply problem. Taylor's catalog for the meat packing industry gives full details of this and many other controls and instruments that can help you protect product quality, and save money too. Write for **Catalog 500MP**. Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada. Instruments for indicating, recording and controlling temperature, pressure, flow, liquid level, speed, density, load and humidity.



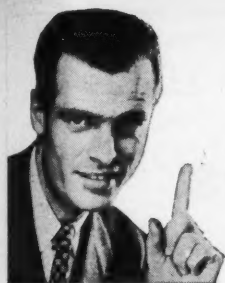
With a Taylor 36-R Self-Acting Controller there is no need to worry about manually regulating valves for adequate water temperature control. This control system requires no compressed air or electricity for its operation. It will pay for itself in fuel savings in a short time and give you the assurance that you are always meeting sterilization requirements.

Taylor Instruments

— MEAN —

ACCURACY FIRST

IN HOME AND INDUSTRY



In **ONE** simple operation,

the **NEW**

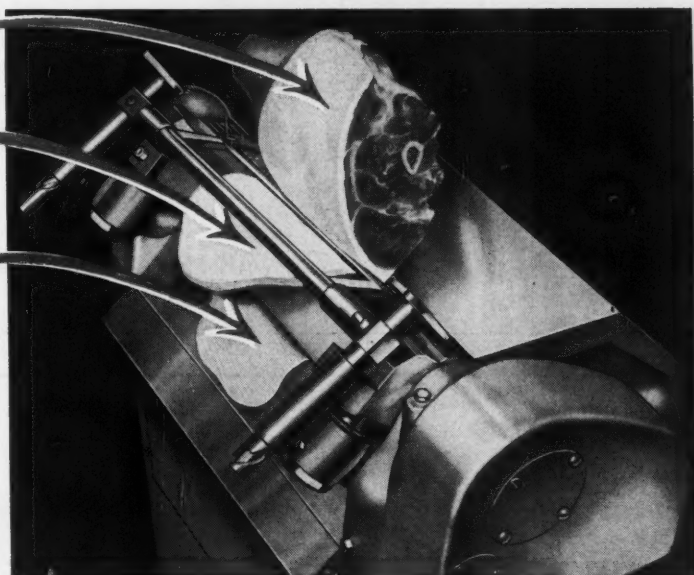
TOWNSEND HAM FATTER

attached to a Townsend Pork-Cut Skinner, gives:

1. A smooth attractive ham with a uniform layer of fat.

2. A piece of fat for prime steam lard.

3. Perfectly-fleshed skin . . . for gelatin.



The Townsend Model 35 Pork-Cut Skinner with the Townsend Ham Fatter, pictured at right, is a worthy companion to the Townsend Model 52 Bacon Skinner and the Townsend Model 66 Membrane Removal Machine.

Increase Yield! Save Labor! Combine Operations!

The Townsend Ham Fatter leaves *more* of the allowable amount of fat on the ham. Result: greater yield of precious ham — as much as 2 percent increase.

Easy to Operate No Special Skill Required

When teamed with the Townsend Model 35 Pork-Cut Skinner, the operator merely feeds the ham into the machine which skins and fleshes, and removes the excess fat in one quick operation. Simple adjustment of Fatter determines and controls amount of fat left on ham. No scored hams or black-eyes. Write for complete details.

TOWNSEND

ENGINEERING COMPANY

2421 HUBBELL AVENUE

DES MOINES, IOWA

The National Provisioner—October 18, 1952

Murphy Refrigerator bodies ...for meat packers



Murphy Bodies are custom-built to meet any individual refrigerated hauling requirement. Murphy Bodies are scientifically refrigerated and insulated, using the best and lightest insulating materials available. Solve your refrigeration problems with a custom-built Murphy Body, available in any size to fit any make or model chassis.

MURPHY BODY WORKS, INC. • WILSON, N. C.
HERRING AVE. PHONE 3361

Selectro SCREENING UNITS

for Packing House By-Products.
Sizing — Fluff Removal, Etc.
for Waste Disposal



Fully Enclosed, Double-Deck Unit, With Wide, Rectangular Discharge Openings.



- Used Extensively in both Meat Packing and Rendering Plants
- 20 Years of Specialized Screening
- Engineered Screen Jobs for Efficient Service
- "Selectro" Units Feature Adjustable Positive Eccentrics and Full-Tilt Adjustment

✓ WRITE FOR DETAILED INFORMATION

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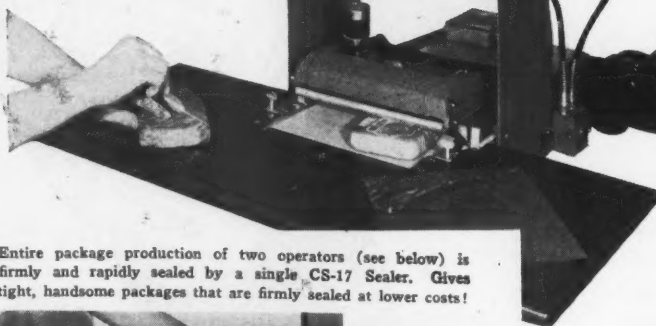
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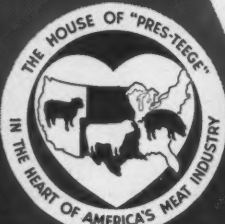
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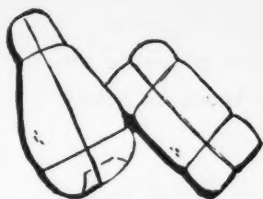


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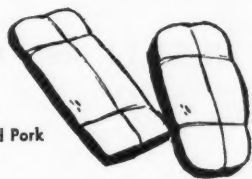


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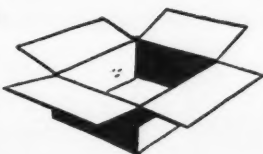
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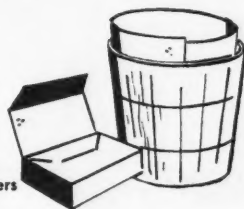
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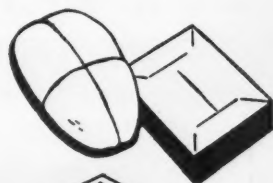
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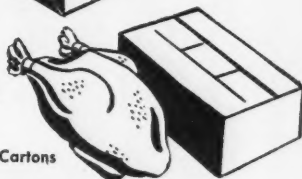
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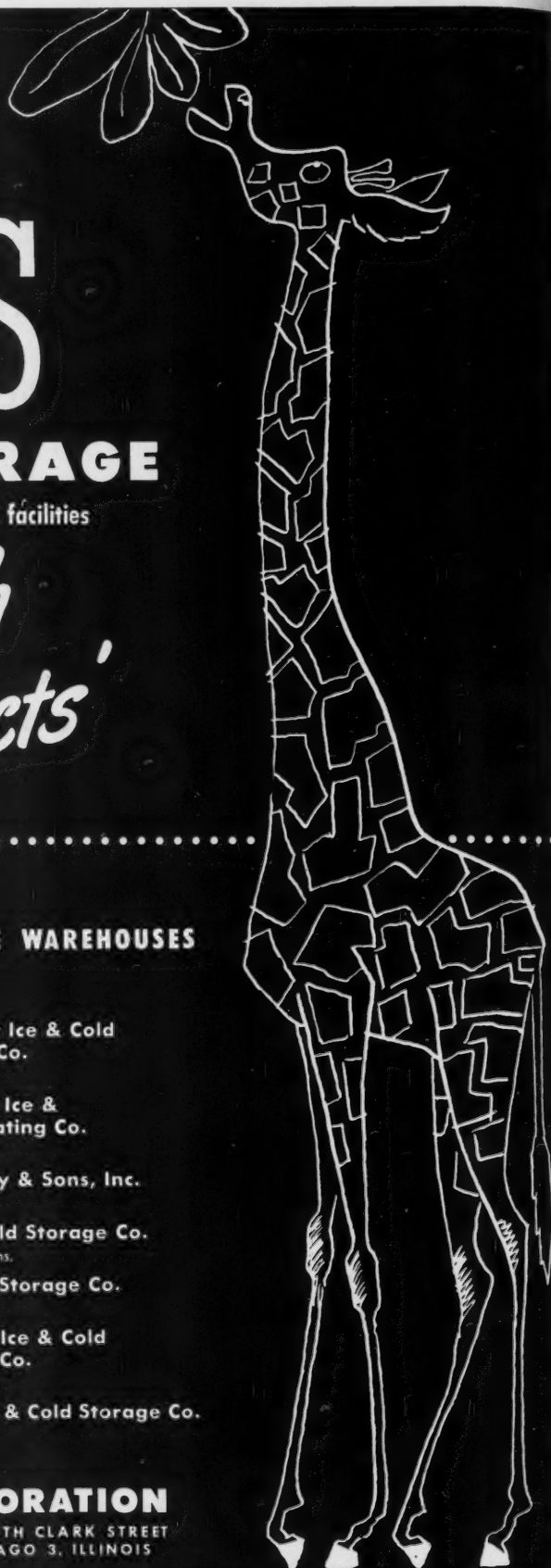
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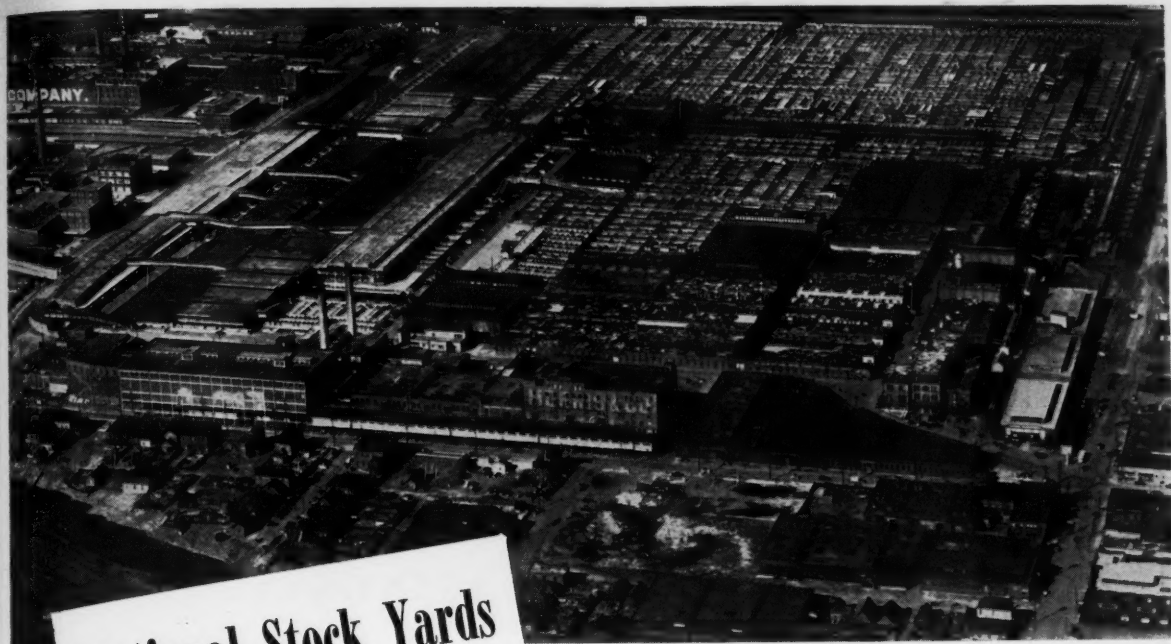
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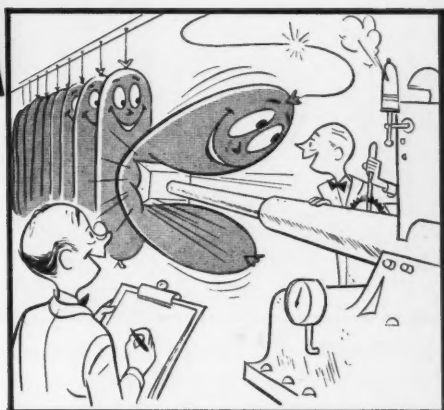


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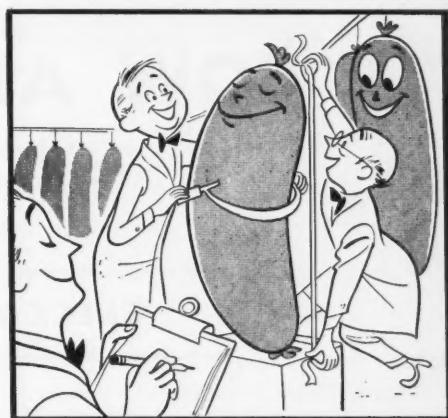
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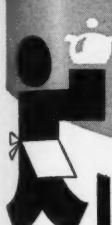


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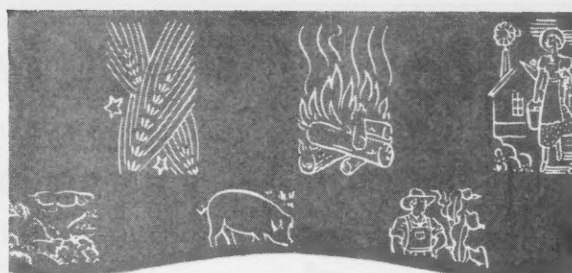


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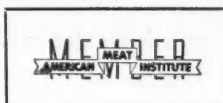
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AMALGAMATED MEAT CUTTERS AND BUTCHER WORKMEN OF NORTH AMERICA, AFL

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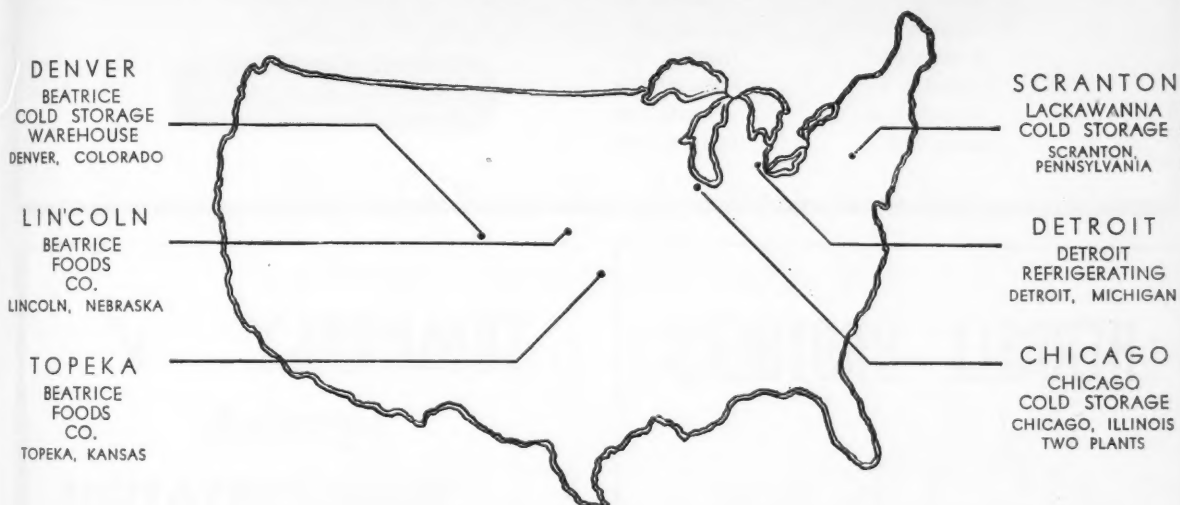
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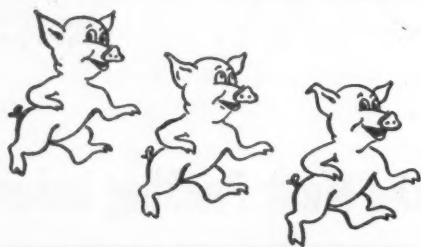
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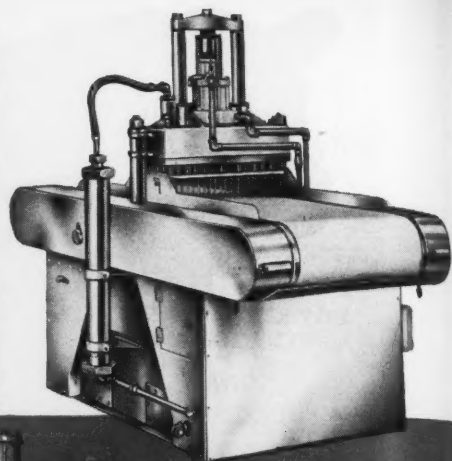
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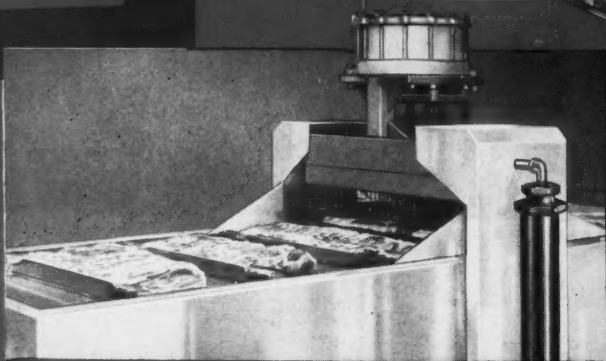


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AN INDUSTRY RESURGENT—IF

THIS YEAR'S American Meat Institute convention may have marked the beginning of a renaissance in the meat industry. The fact of a reawakening in the field of operations was asserted unmistakably by many features of the convention program, by the comments and reactions of conventioners and by the exhibits. This is an area about which critics have sometimes commented caustically that significant progress stopped with the establishment of the "all-the-pig-except-the-squeal" legend.

Evidence of the reawakening is found not only in the inventions and developments themselves—although some of these, such as the Hormel hog immobilizer (see page 112) are revolutionary in import—but also in the attitude of open-minded inquiry with which operating men are examining many of the industry's "fundamental" processes. In this examination they are led and aided by scientists who seek new knowledge (see page 158) of meat and hide curing, fat extraction and other basic techniques to the end that these may be improved or abandoned for better methods.

In their search for better ways to do the industry's jobs, the technicians and scientists successfully try an "impossible" method of treating packinghouse sewage, get down on the floor to find out how to clean (see page 108) or build (see page 121) it better, lift the beef lugger's load (see page 120), and forget (see page 114) that the American meat packing industry was built on the basis of the ice-refrigerated railroad car. They find out why meat discolors (see page 140) when packaged and displayed, and what you can do about it.

Real meaning is given to the slogan "make better lard" when you dig into the factors (see page 144) which influence the production of a good pork fat by the dry rendering process.

Consumers (soapers) stand ready to help the meat industry in improving such by-products as tallow (see page 148) to insure that they can compete more effectively against alternative materials.

Down at the corn roots—on farms, ranches and in laboratories—the producing end of the livestock and meat industry is working to raise more meat more economically (see pages 123 and 130).

The "cash-box" technicians are also making progress in their efforts to give management and operators more definite standards (see page 184) speedily enough (see page 181) so they may be used in the day-to-day tactical decisions which are so vital to the business.

One of the most noteworthy features of this reawakening on the operating side is the fact that the surge of inquiry and new interest is coming from the small and medium-sized packers as well as the larger companies. This constitutes insurance that the so-called independent

packers will maintain their competitive position. In a day of rapid scientific advances, concentration of an industry into larger units may become inevitable unless most of the firms in the field—small or large—participate in the technological progress.

In some respects the operators and technicians have already outrun the managements for whom they work. They are much more certain, for example, that they can find new ways to turn out more and better meat products at lower cost, than are the industry's managers that they can get the larger and more stable profits that are required if the livestock and meat industry is to progress and prosper.

The sorry state of industry profits for 1951-52 hung over the AMI convention like a red cloud. It was mentioned on the speakers' platform—but emphasized even more in the off-the-cuff comments of packers and the constant rumors that "so-and-so is up for sale," and that "Joe Dokes is taking over Henry Jones" because the latter has gone deep in the red.

Both Chairman H. H. Corey and President Wesley Hardenbergh of the American Meat Institute noted (see pages 187 and 105) that the industry's habitually thin margins have almost vanished during the current year. Although the situation will probably improve, as Hardenbergh pointed out, because many packers have now reached the "ouching point," the recovery will not compensate for the losses packers have already encountered or the past years of scanty returns.

The industry must make more money, and it must make

that money with all the year-in, year-out consistency that economic conditions will permit.

Meat packers have proved that they can plan and act progressively in promoting their products through the Meat Educational Program. In that endeavor, and in their sponsorship of basic research through the American Meat Institute Foundation, they are investing dollars today for dividends that are certain to come back over the years.

Yet these progressive efforts, and the reawakening on the operating side, must all fail unless management solves the problem of earning sufficient profits to compensate its stockholders and to support a program of steady improvement in the important fields of methods and merchandising.

Meat industry management must supply the initiative and imagination on the profit side to match the drive already started by packer scientists, technicians and merchandisers.

The new American Meat Institute officers and directors have been elected (see page 237), the exhibits have been torn down, the meeting halls are empty, the programs are thrown away, the badges are discarded, the last photo flash bulb has popped and the complete convention report issue of *THE NATIONAL PROVISIONER* is about to go on the press.

Looking back over it all we still believe that the meat industry is beginning a renaissance—but it must find the profits to pay for its progress.

THE EDITOR



Opening Session...

"The State of the Meat Industry" by AMI President Wesley Hardenbergh — "A Realistic Approach to a Plant Sanitation Program" by A. J. Steffen — "Hormel's Revolutionary Hog Immobilizer" by L. W. Murphy.

Everything Going Up Except Profit



HARDENBERGH

I HAVE A three-fold duty here today.

First, I have the pleasure of welcoming you most cordially to the Institute's forty-seventh annual meeting.

In addition, I wish to express the sincere hope that you not only profit from your visit here, but that you also enjoy it.

Secondly, I am supposed to discuss "The State of the Industry," and then introduce to you two speakers who have something really worthwhile to present.

There are a few points I would like to make briefly about the program and about our forty-seventh annual meeting.

Our program is planned to bring you useful information. This year, as also was the case last year, we bring you some absolutely new information on operating developments that promise to solve some of the industry's most vexing problems. Last year one big feature was Canada Packers' presentation of its new method of dressing cattle on the rail. This year, among other things, our program brings you information about a new hog immobilizer and a new method of handling meat packing plant wastes.

These developments are absolutely new, presented here for the first time. And here at the annual meeting of the AMI is probably the only place where you will be able to learn about them in detail in some time, short of a trip to a plant where they are installed.

There are other features on our program that should be of great value to all packers, giving them answers to many problems, information on many subjects, opinions on future developments.

Our program is designed to make your trip worthwhile

—to pay you off in information, know-how and other values.

As you will note, the sessions today and tomorrow are somewhat more specialized than those on Monday and Tuesday, but all will be worth attending.

On the time-worn theory that all work and no play makes packers fade away, you will note that, in the case of most sessions, and particularly those on Monday and Tuesday, the program is not too crowded, leaving plenty of time for—shall we say—extra curricular activities?

One place to spend some of this time is at the exhibits which we believe are more extensive, more attractive and more practical than ever. We think you can learn a lot by visiting them. Then, too, there are hospitality rooms which you will want to visit and where you will meet many friends and make new acquaintances during the periods when our meetings are not in session.

Members of the staff are available to any of you here who have problems to discuss with them, questions you wish to put to them, or suggestions you may wish to make to them.

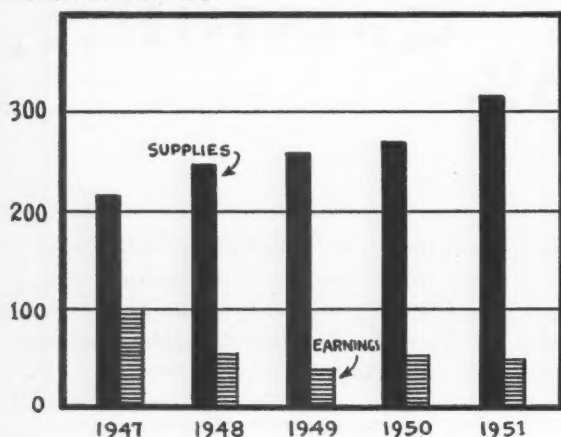
You will also want to visit with packers you know and meet as many others as possible, particularly those whose type of business resembles your own but who may be located in different parts of the country. Many packers tell us they find the interchange of views with other packers a most valuable part of our annual meeting. We hope that those of you who are here for the first time or who may not know many other packers will ask the help of the staff members to introduce you around.

While you are in town, we urge you to visit the AMI Foundation out the University of Chicago and learn first-hand about the important activities being conducted there. I understand some people may be planning a visit there Monday afternoon. Visit us, too, at Institute headquarters at 59 E. Van Buren st., either after the annual meeting or whenever you happen to be in town. There's a staff there to help you and serve you and will welcome the opportunity to do so.

For many packers the year 1952 seems destined to go

SUPPLIES UP - EARNINGS DOWN

MILLIONS OF DOLLARS



down in the records as one of the most unsatisfactory years in the recent history of our industry. I am referring, of course, to the regrettably low level of earnings during the meat packing year just closing.

As one checks over the industry's profit results for the past several decades, he is impressed—I was, at least—with two facts: the relative stability of earnings and the meagerness of the profit margin. During most years the industry makes a profit but it always is small in relation to the earnings of most other industries, and some years it approaches the vanishing point.

No student of business, no financial analyst, probably few investors can look at that profit margin and see in it a return sufficient to take proper care of depreciation, obsolescence and adequate research and development for the future.

For the future of our industry, for the future of those who have chosen the industry for a career, for the future of investors in the industry and even for the future of the meat-eating public, such a state of affairs is most unfortunate.

There are many difficulties in the way of a profit return for our industry commensurate with the service it performs and comparable with those of other essential industries, not the least of which is that our business is easy to get into, with a minimum of capital, and many are doing so constantly.

Thus, we have an ever-increasing number of companies and these companies have a legitimate desire to grow and expand, with the result that they tend frequently to pay more for their livestock than the market for the product therefrom will justify.

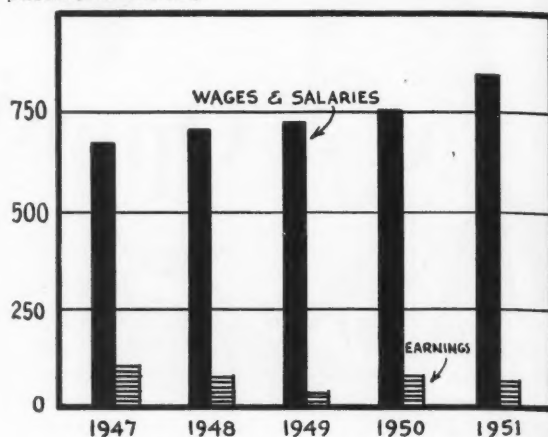
Another factor of growing importance is the increase in fixed costs that has accompanied the inflationary price situation, including especially the guaranteed work week, which so often gives packers the option only of choosing between two losses—a loss occasioned by shutting down, or a loss resulting from operating when current operating conditions are unsatisfactory.

Every packer affected will recognize the necessity of bringing about a more satisfactory relationship between income and outgo.

There are only three means by which this end can be

WAGES & SALARIES UP - EARNINGS DOWN

MILLIONS OF DOLLARS



accomplished: 1) A reduction in operating costs; 2) A reduction in livestock costs, and 3) An increase in the price of meat and by-products. All three avenues should be explored, but only one appears to offer any substantial hope for relief.

We in the packing industry know that operating costs are in a rising trend, and that there apparently is little hope of reducing them. We also know, regardless of ill-informed statements to the contrary, which are sometimes heard, that we have very little control, if any, over the price which the public will pay for the products we produce. That leaves livestock costs as the only avenue offering much hope for relief.

I do not suggest, and would not suggest, that there should be any understanding of any kind between any packers regarding the prices they pay, or any other aspect of their buying programs. Neither do I suggest any resort to governmental price fixing.

This industry has had enough of government price fixing under OPA and OPS to know that it is thoroughly impractical and unworkable and that attempts to control prices sooner or later restrict production, distort distribution and generally create havoc, injuring everybody, including the consumer for whose alleged benefit they are imposed. Part of our present troubles, as a matter of fact, are due to price control.

I do believe that the industry must find some way of avoiding periods of losses, such as those it has encountered this year, and that each packer in the individual and uncontrolled operation of his own business should recognize the inescapable fact that he can prosper only if he keeps what he pays out in line with what he takes in.

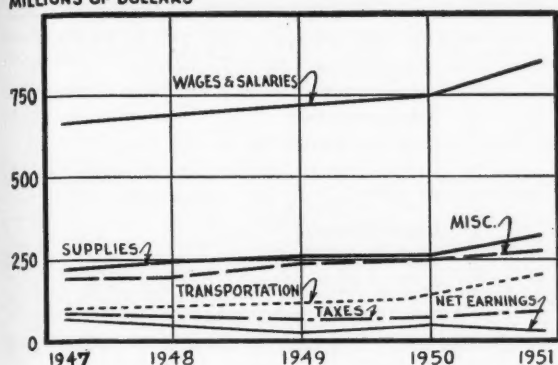
Several of us on the staff have devoted long discussion and deep study to this problem and it is our opinion that each member of the industry must develop and apply what might be called enlightened self-restraint.

For several years now we have been collecting figures from a large number of packers. The point has been reached where we have figures over a sufficiently long period of years to enable us to make useful comparisons. These figures, collected from some 90 companies, show some startling facts.

One of them is that compensation paid employees went

COSTS UP - EARNINGS DOWN

MILLIONS OF DOLLARS



up \$110,000,000 from 1950 to 1951. The cost of supplies and containers increased approximately \$60,000,000 in the same period.

And net earnings went down \$7,000,000.

We have here a chart which shows what has been happening during the five-year period. From this you can see that everything has been going up, up, up—everything but profits, and they have been going down, down, down. The industry's expanding costs have squeezed its profit margin almost year by year.

The remaining charts show how the two big items—payments to employees and costs of supplies and containers—have increased in relation to profits. The charts are worthy of careful study.

Some of the industry's costs have risen almost astronomically during the last five years.

The common labor rate, for example, is up 39 per cent; freight rates on product have increased 50 to 65 per cent; automobiles for salesmen cost 22 to 37 per cent more; trucks are up about the same; tires are up 18 to 21 per cent; building materials have increased 7 to 65 per cent, and various other supplies such as coal, containers, curing materials and wrapping materials are up 2 to 42 per cent.

And during the same period, the wholesale value of meats and meat products shows a quite different trend in many cases. Beef carcasses are up 26 to 29 per cent but most pork products are well below prices in 1947, and such products as hides, grease, tallow and lard are from 26 to 38 per cent lower than they were in 1947. Is it any wonder that profits are non-existent in the case of some operators?

We on the Institute staff believe that we have been remiss in not keeping before you facts like those pictured here, and we propose to do a better job of bringing them to your attention in the future. For we believe that no person seriously interested in the successful operation of his business can ignore the facts shown here.

It is commonly recognized that the only way the industry can obtain an increased share of the consumer's dollar for its products is to make those products better and more attractive and more wanted and to increase per capita consumption. This we are trying to do through product improvement, packaging, research to establish nutritive values and healthfulness, and the Meat Educational Program.

That, of course, is a long-range program and, with the possible exception of promotional activities on a specific cut or cuts, can have no little effect on values over a short period.

It also is important to remember, as many of our leaders have pointed out, that meat is essentially a perishable in uncontrolled supply and, as such, must be priced at levels that will move the current supply into consumption while it is still fresh. These factors tend to establish at any one time a ceiling on prices that is far more effective than any OPS ceiling ever could be—the ceiling established by the law of supply and demand.

Since in practice there is almost always a ceiling in effect on meat prices, the packer who pays too much for his livestock, or who operates inefficiently, seems sure to suffer a loss on his operations.

There are always opportunities, at certain seasons of the year, to accumulate product for sale later when shorter supplies may bring higher markets. But too many people in our industry are optimists, and too often the storage function does not turn out as well as it should because the products were stored at too high a cost in relation to later values.

Some of the optimists also apparently are not good mathematicians and fail to figure the results when perhaps 25 per cent of the hog comes out of storage, with maybe a 4c inventory gain, while 100 per cent of the hogs slaughtered may be cutting out at a loss of 2c a pound during the season of the year when marketings are sharply reduced.

What I have been trying to say pretty well boils down to the oft-repeated slogan: "Buy them right." Certainly, no real benefit is conferred on the livestock producer if the packer pays more for livestock than the market for the meat and by-products, less expenses, justifies. A continuation of such a policy, or excessive indulgence in it, can only harm the producer through weakening the structure of the packing industry and making it difficult or impossible for the industry to progress and advance as it should in the producers' own self-interest.

In saying this, I do not for a minute mean to lose sight of the packers' obligation to do all in his power to operate economically and to merchandise the producer's product with maximum effectiveness, and I know our industry will not let the producer down in this or any other respect, or the consumer, for that matter. In other words, the industry not only must buy properly—it also must sell its products properly, and be a true emblem of values.

I feel sure that producers must recognize the efficiency with which the industry operates—an efficiency that at times is so great that the packer does his work for nothing or practically nothing.

It used to be thought that "czars" were the salvation of highly competitive industries. Today about the only industries having czars are in the amusement field and the main functions of the czars seem to be along moral lines. It may be, of course, that the morals of meat packers need looking after, but if having a czar meant inflexibilities and rigidities in livestock or meat prices, he wouldn't be popular long in this industry, for the simple reason that the industry couldn't survive under such conditions, as witness its hardships under OPA and OPS.

The only solution to improved results in the industry,

as we see it, is for every important individual in it, in a controlling capacity, first, to realize his responsibility to himself, to the consuming public, to his company, to his stockholders and to his industry; and second, to exercise such judgment and restraint as will insure improved conditions.

This is not just the responsibility of one man, or two men or four men. It is the responsibility of the head of every company. There are too many firms in our industry and too much capacity among them for just a few to achieve results. The responsibility is industry-wide.

And there is no other way. On the one hand, the law of the land and public opinion; on the other, the inflexible law of supply and demand, prevent any other solution.

There's a saying in our industry that when things get so bad that people are hurt to the point where they can't stand any more, things will improve. One member has referred to it as the "ouching point."

It usually works out that way, and what is needed is a lessened capacity for suffering, and increased sensitivity to pain.

What is needed is a realization that our salvation lies in ourselves, and nowhere else. What is needed is the realization that each must do our part.

What is needed is an enlightened and persisting self-restraint on the part of all of us—little, big, medium, all.

When we get that, things will be better.

A Sanitation Program Will Pay Off



STEFFEN

the best, most efficient job we can today and to plan for a better tomorrow.

First, what do we expect of a good sanitation program? Well, we want to produce a clean product with good keeping quality to keep the retailer and the consumer coming back for more. That's the main objective.

Then, too, we want to maintain our standards of sanitation. We want to eliminate confusion in complying with reasonable government standards and regulations. We want efficiency in sanitation. We want to promote sanitation consciousness among production personnel. We want to eliminate divided responsibility and duplication of effort, and we want to meet emergencies with pre-planned procedures. How can we build such a smoothly running machine?

Naturally, successful sanitation programs are not all alike. They vary with the size and number of plants involved, the type of personnel available, the character of the buildings, equipment and environment, the climatic conditions, and the types of products manufactured. For convenience we will limit this discussion to a program for a single large packing plant rather than a chain. An

outline of a sanitation program for such a plant would look something like this:

A REALISTIC APPROACH TO A PLANT SANITATION PROGRAM

1. Administration
2. Built-In Sanitation
3. Utilities in the Sanitation Program
4. Plant Cleaning and Sanitizing
5. Insect Control
6. Rodent Control
7. Selling Sanitation to the Employee

Administration: One man on the superintendent's staff should be responsible for sanitary control for the entire plant. This may be a full-time or part-time job, depending upon the size of the plant. The reasons for this centralized responsibility will become evident as we go along through this outline.

This man, the "plant sanitarian," sets up procedures and policies for all phases of environmental sanitation, for refuse handling and disposal, for waste saving and treatment, for water purification. He also heads up the sanitation department.

The concept of a separate sanitation department is somewhat new to the packing industry so a word of explanation is desirable. All the employees on night sanitation, insect control, rodent control and yard sanitation are in this department.

A separate sanitation department produces evident economies, especially in night sanitation. Several adjoining departments can be cleaned by a single crew. Greater use can be made of mechanized sanitation equipment. Personnel can be employed to better advantage if the entire night sanitation job is directed by a single foreman responsible to the plant sanitarian. The night sanitation foreman can also supervise night insect and rodent control work if the plant is not too large. The daytime insect and rodent control operations and yard sanitation are directly supervised by the plant sanitarian.

Since sanitation is an inseparable part of quality control and engineering, the plant superintendent may wish to set up some means for the sanitarian to maintain close liaison with the service departments. This can be done through a sanitation committee which should include in its membership a division superintendent, the plant chemist, the master mechanic and the plant sanitarian.

This committee should periodically examine sanitation problems as they arise; review the sanitarian's inspection reports and recommendations; study new ideas in equipment, materials and procedures and advise the sanitarian on tests of such new ideas; examine proposed changes in plant construction, equipment and operating procedures to be sure that such changes incorporate the best sanitary practices, and it should regularly review sanitation costs. It is a policy making and a planning group.

Built-In Sanitation: We have become increasingly conscious of the fact that sanitation costs less when it is built into a plant originally. It costs less to exclude insects and rodents than to fight them; it costs less to build sanitation into processing rooms and processing equipment than to fight soil with aggressive and often corrosive detergents, abrasives and costly manpower.

Let us cite just a few of the basic principles of built-in sanitation. A number of these principles are standard practice in good construction today. Some, on the other hand, may not be universally accepted for some time. However, they will help us shape our course for the future and prevent us from repeating the mistakes of the past.

Here are a few sanitation principles which are guiding the planners of tomorrow's food plants:

1. Buildings will be constructed entirely of dense brick, concrete, metal or other impervious, easily cleaned rat-proof and insect-proof materials. This applies to all building materials including insulation for coolers. There will be no painted surfaces in food processing areas.

2. Duct work, electric conduits and sewer and water piping will be above the ceiling, below the floor and behind the walls of processing rooms. They will not be buried in the walls where they become inaccessible. Neither will they be in the processing rooms where they can collect dust.

3. Horizontal surfaces are dust collectors, so there will be no horizontal surfaces in food processing rooms except for working and storage surfaces.

4. Junctions between surfaces meeting at right angles will be coved and rounded in all cases. This includes the floor and wall junction, edges of window recesses and similar structural details as well as construction details of processing equipment. There will be no corners where dirt can lodge.

5. Food handling equipment will be designed for easier cleaning and will be made of stainless steel wherever feasible. Inexpensive stainless-steel coated metal will replace galvanizing.

6. Cleaning will be simplified with built-in piping to distribute detergents and sanitizers, and with automatic washers and scrubbers for tables and conveyors.

7. Product handling will be reduced to a minimum by the use of new conveying ideas. Conveyors will be simpler, with fewer moving parts and will be easier to

1. Jay C. Hormel, chairman of the board, Geo. A. Hormel & Co., Austin, Minn.; George Lewis, vice president, American Meat Institute; Louis E. Kahn, vice president, The E. Kahn's Sons Co., Cincinnati, and Wilfred C. Cooper, F. B. Cooper Co., New York.

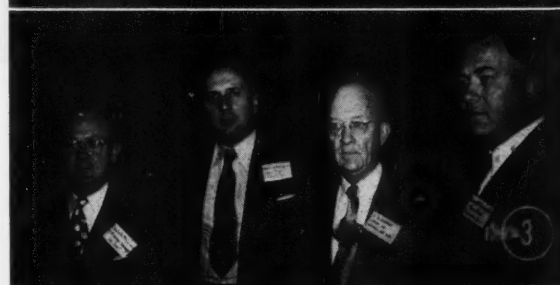
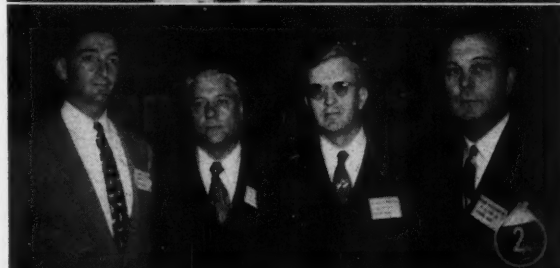
2. Kenneth Bornstein, vice president, Bornstein Co., Boston; Karl F. Voigt, vice president and Estherville manager, Tobin Packing Co., Estherville, Iowa; Richard K. Griffin and Norman Appleyard, jr., both of P. G. Gray Co., Boston.

3. Edwin H. McCormick, president, S. R. Gerber Sausage Co.; Valentine Niezgoda, sales manager, Pasco Meat Products, Inc.; J. R. Richards, director of meat operations, Loblaw, Inc., and Joseph M. Dziminski, president, Pasco Meat Products, Inc., all of Buffalo, N. Y.

4. William P. Bartlow, secretary-treasurer, Bartlow Brothers, Inc., Rushville, Ill.; Martin Oslos, forecasting director, Kingan & Co., Indianapolis; Ernest Bender, boneless beef department, and Paul J. Burch, treasurer, both of Stark, Wetzel & Co., Indianapolis.

5. C. M. Robinson, purchasing agent, Campbell Soup Co. Ltd., New Toronto, Ontario; Jack Schwarz, assistant purchasing agent; V. A. Glidden, purchasing agent, and O. C. Wagner, technologist, all of Campbell Soup Co., Chicago.

6. L. I. Clausen, assistant provision manager, Jacob E. Decker & Sons, Mason City, Iowa; David Speer, sales manager, John Thallon & Co., New York; R. M. Dall, provision manager, Jacob E. Decker & Sons, and S. M. Washer, president, John Thallon & Co.





Packers fill Red Lacquer room at convention's opening session.

RIGHT: Wesley Hardenbergh, president, American Meat Institute, and W. J. Mulalely, retired, American Can Co.



SIGN HERE PLEASE: Meat men fill out cards preparatory to registering on Friday morning.

keep clean. Pneumatic tubes will be used in conveying some materials.

8. Germicides, fungicides, insecticides and rodent repellents will be permanently incorporated into surface coatings and into construction materials.

More items could be mentioned, but these at least indicate the trend.

Utilities in the Sanitation Program: The utilities—water supply, sewage, heating, lighting, ventilation, refrigeration and refuse disposal—play an important part in the sanitation picture.

The water supply, of course, should be safe to drink and should be tested regularly by the plant chemist, according to standard methods. The plant sanitarian should inspect the water supply system regularly. He should see that vacuum breakers and air gaps are provided where back-siphonage hazards exist.

From the sanitation standpoint, sewers should be tight, well-sloped, well-vented and trapped and of sufficient size to prevent back-flow or surging.

Lighting should be sufficient to eliminate dark corners in operating areas, but should not produce glare. Fluorescent lights properly spaced will reduce reflected glare caused by glazed tile and polished metal surfaces.

Heating and ventilating ducts in food processing rooms should be provided with openings for cleaning.

Cleaning and Sanitizing: Let's look at night sanitation as a step-by-step process.

The first step occurs during production time. In addition to the usual daytime cleaning, the foreman should prepare his department for night cleaning. All scrap should be removed, equipment should be shut down, unnecessary lights and water sprays should be turned off.

Where necessary, water sprays may be kept running and cooking kettles can be filled with warm water to help keep the soil soft for easier flushing. Cleanup costs can be reduced if each department foreman will follow a definite shut-down procedure laid out in cooperation with the plant sanitarian.

The rest of the cleaning job is up to the night cleaning crew. They first dismantle equipment as necessary and sweep up any floor scrap missed by the day gang. In the meantime, the hoses are set up and washing starts, using warm water where greases must be removed and cold water where blood is to be washed down. High pressure hot water may be useful in some instances if its use involves no hazard to personnel or property.

High pressure steam alone should not be used. It does not supply enough water to flush the surface, it fogs the working area so the operator can't see what he is doing and tends to bake soil onto the surface. Furthermore, blowing steam on the equipment does not sterilize it.

Areas that need additional cleaning are then cleaned with detergent solutions, followed by a final warm rinse before the detergent can dry. All surfaces subject to corrosion are treated with packer's technical white oil after drying.

Much has been said and written about detergents in cleaning. Ordinarily the proper detergent solutions, applied with portable spray trucks, followed by brushing where necessary, will loosen tenacious soil with the least difficulty and at the lowest overall cost.

The proper detergent is one that quickly wets the surface, emulsifies and suspends grease and oils, prevents film formation and deposition of calcium and magnesium salts from hard water, dissolves and suspends proteins, rinses easily and does not corrode the equipment surfaces.

These requirements can best be satisfied with compounded detergents containing a mixture of cleaning chemicals balanced to do the intended job. A single general alkaline detergent will do most of the work, with the help of some special compounds for smokehouses, and for removing heavy grease or baked-on deposits. Acid cleaners are used in some cases to remove white deposits similar to the deposit known as milkstone in the dairy industry and to remove baked-on deposits in cooking vessels.

Some scrubbing is generally necessary with even the best tailored detergent. Several packers are now using

brushes for this job, in place of metal sponges. Tests have shown that metal sponges actually aggravate the cleaning problem by making microscopic scratches in the metal surface, where deposits can lodge more securely than ever. There is also the hazard of metal particles finding their way into food products, creating possible food claim problems.

The plant chemist plays an active part in selecting chemical cleaning aids, as well as sanitizers and mold inhibitors. He may need to conduct tests to determine when and where such materials are needed.

Sodium hypochlorite, chloramine and quaternary ammonium compounds all have a place in sanitization and mold control. Each has particular advantages and disadvantages which should be factually evaluated for each job by the plant chemist and the sanitarian. The same considerations apply to the several fungicidal paints and coatings which have recently come into prominence.

Insect Control: Emphasis should be placed on keeping insects out of the plant. All openings to the outdoors should be covered with 16 mesh screening. Doors and shipping chutes should be self-closing. Where doors and other openings cannot be conveniently screened, some plants use fly fans which throw a strong blast of air downward and slightly outward through the doorway. Water sprays are used at livestock entries. Packaging materials, grains and other products brought in from the outside should be inspected before acceptance and at regular intervals thereafter.

The sanitarian should regularly inspect lockers, lunchrooms, spice and grain rooms and storage areas. Stored materials should be kept away from the wall and on racks at least 10 in. off the floor not only for inspection purposes, but also for effective control. A wide white band painted on the floor along the wall will help keep this space clear. Accidental spillage of spice and grain should be picked up immediately.

The approved insecticides and rodenticides are listed in Meat Inspection Division Memorandum 52 and Supplements 1 through 4. These regulations require that exposed meats be removed before spraying and the room washed down after spraying.

Insecticides can be divided into two general groups: Contact or space sprays which kill by direct contact with the insect, and residual sprays which leave an invisible residue that remains toxic to insects for a long time.

Of the approved contact sprays, the most convenient and the most successful in the writer's experience is a combination of pyrethrins and piperonyl butoxide in a deodorized base oil. For large scale work, a good fogging power sprayer is desirable.

One type which has been found especially effective throws a jet of insecticide against the back of a whirling disk, discharging the insecticide as a dense aerosol fog. Ordinary paint spray guns can be used for smaller scale work. For limited local spraying in vestibules and offices, the ordinary hand-operated "flit-gun" is useful.

Approved residual spray materials, such as DDT, chlordane, lindane and methoxychlor, provide good control of flies outdoors and of crawling insects in their harborages. Chlordane is especially effective in controlling roaches. According to MID regulations, residuals cannot be used where exposed meats are handled.

For fly control, residual sprays are applied on fly resting surfaces such as fences, walls around livestock



TOP: C. O. Hinsdale, general manager, Klarer Provision Co., Louisville; Mrs. H. D. Anderson, purchasing agent; H. H. Slatery, jr., vice president, and David M. Traver, all of East Tennessee Packing Co., Knoxville.

CENTER: Joe Finkbeiner, secretary, Little Rock Packing Co., Little Rock; Fred J. Beard, meat grading service, USDA, Washington, D.C.; Chris. Finkbeiner, president, Little Rock Packing Co., and D. M. Doty, assistant director, American Meat Institute Foundation, Chicago.

BOTTOM: C. R. Stephenson, owner; Mrs. C. R. Stephenson, Mrs. Joe Ingraham and Joe Ingraham, all of C. R. Stephenson Co., Calumet City, Ill.

pens, the sunny sides of buildings and in storage and inedible rooms. Oil solutions of residuals are satisfactory for relatively impervious surfaces and suspensions of wettable powders are best for unpainted wood and common brick. Emulsions are useful where the white residue of the powder may be objectionable.

The most successful sprayer for general local applications of residuals is a stainless steel knapsack sprayer equipped with a fan spray nozzle. For large scale work various types of orchard sprayers are useful.

Fumigation should be avoided. It is expensive, incon-

venient and requires special precautions. Most fumigants are ineffective below 60° F. All fumigation work should be done by licensed professional operators.

Rodent Control: As in insect control, the best answer to rodent control is to keep rodents out of the plant. Even for older buildings it will generally be found that a good rodent proofing job will pay for itself many times over, not only by eliminating rat and mouse damage, but also by reducing the cost of routine control work.

Rat and mouse proofing procedures are outlined in several good booklets available through government and industry channels. Rat and mouse harborages must also be eliminated within the plant.

In spite of the best possible control through rodent proofing, further control with baits and traps is generally necessary. With the advent of warfarin poison, the rodent control job has been considerably simplified. Warfarin is supplied either as a ready-made bait mixed with cereal grain meal or as a powder for mixing with cornmeal.

Warfarin must be fed over a continuous period of five to 15 days to kill rats and about 15 to 30 days to kill mice. The active ingredient is a chemical which prevents the blood from clotting normally and death results from internal hemorrhage. Warfarin is comparatively non-toxic to man, especially since it must be taken over a period of several days to cause any serious damage.

The chief advantage in using warfarin is the fact that rats feeding on it do not develop bait shyness. Other rat poisons impart a taste to the bait that discourages hearty eating and the rat may fail to take a fatal dose.

The tendency for the rat to return to the bait and even to attract other rats to the same bait can be used to advantage in a food plant control program by placing warfarin bait stations in areas frequented by rodents, but away from food processing areas. Thus the bait will actually attract the rats away from the food processing area and thereby improve the entire control program. Bait stations can be maintained on a continuous basis, especially where there are potential possibilities for rat entry.

In special instances where warfarin cannot be used the sanitarian will resort to trapping. Mice are easily trapped, but only a small percentage of any rat population can be coaxed into traps even by the most ingenious operator.

Selling Sanitation to the Employee: To insure sanitary handling of food products, the employees must be sold on sanitation. The working environment should be clean, light and pleasant to encourage sanitary consciousness. The canteens, restaurants, lunchrooms, dressing rooms and toilets should be so constructed and so maintained that they help serve as sanitation salesmen.

Plenty of conspicuously marked refuse cans should be spotted in locations where employees spend their spell time and lunch time periods. Waste paper and lunch refuse found on the floor can be as much the fault of the plant sanitarian as the employee.

Employees, particularly the foremen, should be encouraged to watch for signs of insects and rodents. The sanitation committee should invite suggestions from employees for ways of improving sanitation. All foreman should be trained in detecting the presence of insects and rodents by means of illustrated talks.

Sanitation should be stressed in the information booklet given to new employees. The superintendent should

stress sanitation in his every day contacts with employees and should show by his interest and attitude that the plant management is sold on sanitation.

The cost of sanitation is a significant part of plant operating charges. Direct labor and material costs chargeable to sanitation can run from \$1 to \$2 per 1,000 lbs. liveweight kill on an annual average. Within this range, savings up to 50c per 1,000 lbs. liveweight kill can be realized through improvements in the sanitation program in individual plants.

Add to these savings the more intangible but nevertheless real savings from quality improvement, improved yields, reduced maintenance and obsolescence costs and the full possibilities for profit in sanitation begin to be apparent.

If the sanitation program is well planned and diligently supervised, the packer can be secure in the knowledge that he is getting the sanitation job done at the lowest over-all cost.

Hogs Given Anesthetic For Easy Kill



MURPHY

THE NEW METHOD of hog shackling is the result of considerable research, long study and much trial and error experimentation.

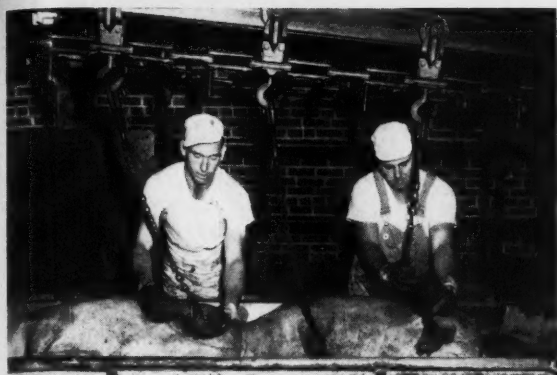
The project started simply enough. Someone suggested the need for improved working conditions and economies in the operation prior to scalding. Unfortunately for those of us who had to come up with the solution, the suggestion came from Hormel's president, H. H. Corey, so immediate action was deemed advisable!

Indeed, our entire management realized that the cost of shackling was high; that shackling was a rough job for man and hog; that it was noisy and dirty and in some degree dangerous, and that it probably involved operative losses. As we all know, consistently good sticking is difficult to accomplish with an active hog thrashing about suspended on a chain. Ever present is the possibility of harm to meat from overheating a hog and a shock condition from climbing a ramp and resisting the drag of the shackling chain.

We needed an immobile hog. Anesthesia was the answer. It may be revelant to say that the discovery and successful use of anesthesia in humans, with the surgeon operating on a quiet and unconscious patient, has been



IMMOBILIZING TUNNEL SEEN FROM SHACKLING END.



SHACKLER'S JOB is quickly and easily done as the hogs lie inert on the moving table which brings them out of the immobilizing tunnel where they have been put to sleep with CO₂ gas.

called the greatest advance in the history of the human race.

At the least, there is a parallel in our method, in the opportunity provided the operator of the knife to do his work better. At first, we tried various methods to improve shackling, working with the fully conscious hog. All of these methods were less than satisfactory. We began to make real progress when we tried anesthesia.

We built a good-sized pilot plant and fully tested various kinds of gas that would put a hog under, but not out. We were entirely successful with CO₂, carbon dioxide, no other than dry ice in its gas form.

We found that we could get complete immobility and insensitivity, with a moderate inhalation, lasting from 40 to 50 seconds. We found also that we could fix the amount of gas inhaled and the duration of its effect within quite narrow limits. The 15 to 20 seconds that we settled upon as the period in which to have the hog in this condition was more than ample for both the hanging and the sticking.

The hog was presented for shackling on a conveyor at a level waist-high to the shackler, permitting him to do his job with complete safety; with ease; without having to bend over or dive down for a hind leg; without having to lug the shackled hog to the traveling hoist, and with cleanliness to himself.

Indeed, pilot plant and working plant demonstrated that in this method the shackle could be put on the hind leg of a hog with no greater effort than a ring may be placed on a lady's finger, and without the labor of persuasion occasionally associated with the latter job.

In this new method, a man places a chain around the motionless leg as easily as placing a rope around a post. Similarly, the hog was presented to the sticker so that he could operate at arm's length, accurately, safely, unhurriedly and with cleanliness to himself.

We were able to work this out on a pilot plant scale. We also were able to explore for all possible harmful effects upon blood and meat. We found none and feel certain that there are none. Our laboratory men, as well as our practical meat men of the packinghouse, could not distinguish meat from hogs through the pilot plant and meat from hogs handled in the standard way.

Also, in this period, we provided the Meat Inspection Division of the Department of Agriculture with full op-

portunity to investigate any possibilities of harmful effects. Meat from anesthetized hogs was shipped to the Washington laboratories. The MID found no harmful effects and gave its approval to the method.

But we still had to build a working plant. We still had unanswered the question of how to get the hogs into the CO₂ chamber, one at a time, in succession, and fast enough so that at least 600 hogs could be handled in an hour.

We built the working plant on the ground floor next to the livestock pens, starting with one immobilizer. The problem of getting the hogs into the unit was not an easy one. Despite all we thought we knew about hog behavior, we found that we didn't quite know it all. We have made a number of improvements in our solution of the problem since we first built the working plant.

Large rubber fingers operating on a continuous chain maintain a separation of the hogs as they go through the immobilizer. The gate separates the hogs. It also is of rubber. It is power operated but manually controlled.

We expect to have the second immobilizer in operation some weeks hence. When it is completed, we will handle all our hogs at Austin by the new method. We are sure the method can be applied to other packinghouse livestock. The gas chamber is lower than the working level because CO₂ is heavier than air.

Carbon dioxide, of course, is a familiar gas. One gets it in the soda of scotch and soda, or in any carbonated beverage. In our use, in the hog immobilizer, it is of sufficient concentration to drop the hog motionless and insensible on the moving conveyor but in no way to injure it.

In all our testing and in our present use, accounting for 300,000 hogs, we have not lost a hog.

The hog, if permitted to live, will be rid of the CO₂ and be able to walk off on its own power in less than a minute after becoming unconscious from the breathing in of the gas.

The CO₂ unites with hemoglobin of the blood and thereby causes the unconsciousness. But the compound formed is unstable. The CO₂ component rapidly separates off and is discharged by exhalation as the hog continues to breathe fresh air before and after sticking.

The carbon dioxide is effective, but as used, harmless. We have found in a test of 19,000 hogs that our new method brought an appreciable reduction in bloody trimmings. We feel certain that there is an appreciable savings in blood. The scalding tub by its paler color reveals less blood carried into it.

In our plant at Austin, the new method will enable us to put a number of shacklers and drivers to more productive work. One man now can hang twice the number of hogs with half the effort.

The cost of the CO₂ runs at less than 3/4c a hog. The lifting of the carcasses after sticking to the fourth floor is done by a 20 H.P. motor at a cost of 15c an hour.

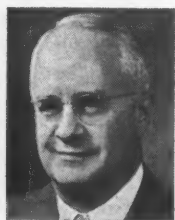
Thus far, our known, demonstrable gains are in operation savings and in working condition. They alone more than compensate to us the cost of our years of research. We are eagerly watching all aspects of the processed hog for other, improved, anticipated effects.

EDITOR'S NOTE: For a more detailed discussion and photographs of the Hormel hog immobilizer, see THE NATIONAL PROVISIONER of October 4, page 8.

Engineering & Construction

"Mechanical Refrigerators on Wheels" by R. W. Ransom — "Painting Out Mold" by V. J. Del Guidice — "A New Method of Handling Packinghouse Wastes" by George J. Schroepfer — "Eliminating Foaming in Rendering" by L. F. Stebelton — "A Leakproof Concrete Floor" by W. H. Everds — "Mechanical Beef Lugging" by Orlando Garapolo.

Mechanical Reefers



RANSOM

Perform Well

LEGEND HAS IT, and perhaps it is true, that the first shipments of perishable meats, over long distances during the warm months of the year, were made from Chicago to the East, with improvised ice bunkers consisting of barrels or boxes. Permanent bunkers for ice followed, and were built into a better constructed car, for subsequent shipments.

Probably from the very beginning, there were those who dreamed of a more direct and satisfactory method of refrigerating these cars and most of us, at some time, have allowed our minds to explore how it might be done.

One idea always shows up: Why not take power for refrigeration from the movement of the car? It sounds simple, but it won't work! For one thing, the car is standing still for 50 per cent of the time while it is loaded.

The two factors which have put the pressure of necessity on improved car refrigeration, are:

1. Increased consumer demand for more and fresher foods at great distances from point of origin.

2. Rapid expansion of the demand for frozen foods, requiring transportation in the frozen state.

In an effort to improve refrigeration during transportation, many improvements have been incorporated in the design of the cars, such as better and more insulation, but in practically every case, ice still has been used to produce the lower temperatures.

Where the product cannot be chilled at loading to a desirable transit temperature, or where heat is generated within the product during transportation, additional problems are present which are not readily handled by ice. Also, ice is of little or no value when it comes to

maintaining temperatures suitable for the transportation of frozen foods.

An ideal system of refrigeration for these cars would, therefore, be one which had ample capacity to cool the load below its loaded temperature to accumulate refrigeration effect. It is, and probably always will be, more costly to produce a ton of refrigeration in transportation equipment than within a plant, so every effort should be made to bring lading temperature to the desired degree before loading.

Technological development in basic fields of science and the application of this knowledge to construction of machines and automatic controls must be credited materially for making possible the construction of the small, high-speed, reliable refrigeration units.

Also, two developments that have progressed faster than mechanically refrigerated cars have contributed much to foster the idea. These are:

1. Self-sufficient or self-contained refrigeration units for motor trucks, and

2. Acceptance of air conditioning equipment for trains, busses, and airplanes, and the success of providing satisfactory servicing.

The motor truck installation has the advantage of always being under the surveillance of the operator of the truck, so attention can be given to the equipment should it fail to operate, or other steps taken to insure the condition of the load.

While we have not taken it very gracefully, when we have been the victim of the air conditioning system in a train, there has been no damage other than to our dispositions.

Equipment installed in a refrigerator car, carrying a 30,000-lb. load of meat, cannot be allowed to lie idle very long without product spoilage. The system must be reliable.

The repercussions of adoption of mechanical units in refrigerator cars will be very far reaching. We feel now that the expansion will be rather slow, but I believe it will materially outstep the average estimate. There are

probably many factors in railroading it will influence that are beyond my knowledge. The value to railroads in elimination of brine drip on trucks, bridges, and switches would seem quite material and the prolonged life of a car will not only benefit the railroads, but also all other car owners. Whether this change will come fast enough to cause unduly rapid obsolescence of ice making and car icing stations that now represent millions in investment by railroads and shippers can only be answered in the future.

When the time is reached that trains can be made up entirely of mechanically refrigerated cars, and can be rolled straight through to destination without switching and time delays caused by stops at re-icing stations, the railroads will be given a great help in competing with refrigerated truck transit.

A 40-ft. heavily insulated car, equipped with mechanical refrigeration and fully serviced, is up to 5 tons lighter than a similar car equipped with ice bunkers and fully iced. The mechanical refrigeration unit placed in one end of the car occupies somewhat more room than one ice bunker; however, usually it does not take as much space as the two ice bunkers combined and thus the available space for lading is increased in practically all cars thus far equipped.

The cost is increased anywhere from one-fourth to one-third. The economies of operation, such as cost of maintenance, depreciation, etc., have not been fully developed, as experience has not been great enough on the part of any of the manufacturers or the owners to establish reliable figures.

To evaluate the development for the shipper and receiver is difficult, as all the improvements made in the delivered product are not tangible. It can be said that mechanical refrigeration is an absolute necessity for complete and constant satisfaction in the shipping of frozen foods of all kinds.

The enthusiasm on the part of our customers in Florida when they receive products shipped in the one unit now

in operation lends support to the decision we made to start the use of mechanical refrigeration. In addition to this, other customers who saw the product have asked when they could receive meats shipped in similar cars. We wish we were going to have more of them for our use immediately.

For those who insist upon precooling the car before the start of loading, mechanical refrigerator units offer the best answer with a relatively short period required to accomplish the job. The accuracy of temperature control is without question and all the advantages of forced circulation in the car are obtained.

Our brief experience is that we benefit greatly by the ability of this mechanical equipment to hold the temperature of the car lower than was formerly possible with ice and salt and, with the control of air circulation and temperature range of air in and out, relative humidity can be maintained within the correct range to avoid excessive shrink or a wet car.

While stated before, products should be brought to the proper temperature before loading, but the mechanical unit does provide some insurance against damage to other lading by some portion being loaded too warm. We expect to conduct tests up to the point of abuse in order fully to justify the use of these cars and provide data to judge later additions to our fleet.

Our experience with the car has been too short to enable us to present any data on claims. We have taken steps to equip each car with a recording thermometer. This gives us the data needed to show that conditions during transit are correct. With a good control at the plant end, we will surely be in a much improved position to justify claims than we are when using ice.

Basically, the refrigerator car body should be no different for either ice or mechanical refrigeration. However, the more positive control inherent with mechanical units makes minor faults of the car body show up. The air and water vapor infiltration of an old car body shows up very distinctly in the reduction of the effectiveness of a mechanical refrigerating system, particularly as the temperature of operation is lowered.

The acceptance of greater thickness of insulation in car body construction has about reached a maximum; however, the need for a good seal on the exterior surfaces of the insulation to prevent infiltration is most essential and should be given more attention than has been done in the past.

Some duct work is recommended by some manufactur-

LEFT: A. D. Donnell, executive vice president; Dale A. Kilpatrick, vice president; G. G. Baxter, dressed beef sales; L. M. Kyner, assistant manager, beef, lamb and veal, all of the Rath Packing Co., Waterloo, and A. J. Steffen, sanitary engineer, Wilson & Co., Inc., Chicago.

RIGHT: Paul E. Trippe, branch manager, Birmingham, Ala.; R. A. Bateman, purchasing agent; Harry Matthews; R. F. Gray, executive vice president, and C. A. Nockleby, vice president packing division, all of Geo. A. Hormel & Co., Austin, Minn.



ers of mechanical equipment with the maximum involving the air supply delivered under solid floor racks which form a plenum chamber. The air is forced up all walls through a 1-in. air space, exhausting to the lading area near the ceiling, and returning to the refrigeration unit in the space over the lading. This system entirely envelops the lading in a layer of refrigerated air. Others feel the rapidity of air change precludes the need for an extensive duct system.

Other features in car design for mechanical equipment are the elimination of hatches, the elimination of any construction at the "B" end of the car and the construction of an insulated bulk head across the "A" end, leaving sufficient room for the equipment. Louvered grills are provided for air supply and exhaust for radiator and condenser requirements. Fuel supply tanks are slung under the car near the "A" end and storage battery box or boxes can also be located there.

To the best of my knowledge, there are only four manufacturers of equipment. They have 174 cars equipped and 139 on order from five operators. This means a total of 313 cars in use by next spring. This is still a small percentage of the 125,000 refrigerator cars in use in this country.

Manufacturer of Refrigeration Equipment	John Morrell and Co. Leased From Mather Stock Car Company	Fruit Growers Express	Pacific Fruit Express Company	Santa Fe	Boston and Maine R.R.	Total
U.S. Thermo Control						
In Use	1	11			8	20
On order	24					24
Frigidaire						
In Use		154				154
On order		60	14	10		84
Trane						
On order			11	10		21
Carrier						
On order				10		10
	25	225	25	30	8	313

I am grateful and want to extend credit to these four manufacturers who have given their help in assembling these comments.

Of the four makes of equipment now available, three are standard with small diesel engines and one is standard with gas engine. One unit is a complete package which slides into the car, fitting tightly to air duct openings. In other words the prime mover, compressor, generator, radiator, condenser, condenser fan, low side coil and circulating fan are mounted on one base. Others have parts such as the low side coil and circulating fan permanently installed in the car with the balance of the equipment mounted on a base so that it can be readily replaced.

Some designs involve direct connection of the prime mover with a generator which furnishes power for electric motors driving all the rest of the equipment. This has the advantage of possible plug-in at the plant for pre-cooling of the car and for operation during time of loading. Automatic defrosting is accomplished in these units mainly by reverse cycle operation and in one case by electric heater elements built directly into the evaporator coil. Both of these means are used when needed to pro-

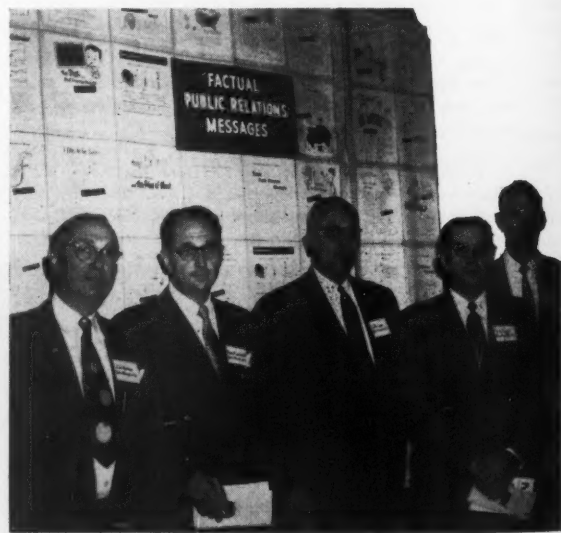


John Thompson, president; Fred DiPasquale, supervisor of kill; John Pinta, plant superintendent; R. W. Unwin, assistant to the president, all of the Reliable Packing Company, Chicago, and Greg Pietraszek, technical editor, The National Provisioner.

vide heat to hold car temperature from dropping below the thermostat setting.

The one Thermo-King equipped car which we have in service is the pattern for 24 more that will be delivered during the next few months. Since it is the only one in use, and checking and servicing not fully arranged for, it is operated with two units installed and has carried five loads from our Sioux Falls plant to Florida in excellent condition.

We had hoped to have data available by this time that would more clearly give you the results of the operation. However, there have been many details to learn, which we are doing by experience, and some of them have in-



J. W. Nelson, mechanical superintendent, Sioux Falls, S.D.; Ross Kluckholm, divisional superintendent, Ottumwa, Iowa; John M. Lowe, manager of purchases; T. O. Ogle, superintendent, and G. H. Bell, manager of by-products sales, all of John Morrell & Co., Sioux Falls, S.D.

terfered with obtaining the records that both you and we would like to see.

We have had trouble keeping the pens filled with ink to give us more than a 1½- to 2-day record of the temperature in the car; however, the equipment has been functioning satisfactorily and the temperature has been right at the thermostat setting on its arrival in Florida, so we know the equipment has operated reliably thus far.

The car is in service on regular car route operation, which means that the product is loaded into the car in as nearly as possible the reverse order of unloading, and thus the different products are pretty well intermingled throughout the load. All product is in shipping containers, except for beef and lamb, which are wrapped and hung.

With this type of operation, we set the thermostat at 34° F., which gives us a range of about 33° to 35°. Normally our car carries 30,000 to 35,000 lbs. of product. Some records of temperature show beef loaded at 35°, arriving with an internal round temperature of 35°, lambs loaded at 36°, arriving at 34°, lard in quantities of 3,000 and 4,000 lbs., loaded at 55°, arriving with the center carton of a 48-lb. case at 36°.

For any accurate records of relative humidity, we have to look to the future. The appearance of the beef and lamb on arrival at Miami is almost all the evidence we need to know that the operating conditions of the refrigeration equipment in this first car are satisfactory.

This car, as well as the 24 more to come, are the property of the Mather Stock Car Co. and on lease to us. The Thermo-King Railway Corp. of Minneapolis owns the refrigeration equipment installed in these cars and has assumed the complete responsibility for operation in transit, maintenance and fuel and oil supply. Thus, they are selling us a stipulated temperature in the car during the time it is carrying a load for us.

Our contract with them also places liability on them for damage, partial or complete, of the lading if caused by failure to maintain satisfactory temperature. We are charged on the basis of lapsed hours from the time the switch which energizes the controls is turned on until the switch is turned off at the destination, whether the mechanism has to run or not.

The car has averaged 21 days from one loading in Sioux Falls to the next loading for which we have paid an average cost of \$45.00 per trip for refrigeration.

I do not know what tariff regulations govern other equipment in use; however, our one car has been operating under rule 170, relating to mechanical refrigeration service and charges. This applies to experimental equipment and involves the payment on our part to the railroad of \$17.19 per trip from our Sioux Falls, S. D., plant to Florida.

The various committees interested in tariff regulations are seriously considering the special charges that should apply against shipments in this type of refrigerated car. We hope they will eventually be removed.

Should mechanical car refrigeration "catch on" as did air conditioning of passenger trains, we can visualize the "reefer express" train of a few years hence consisting of a number of cars cooled with small units. These could be electrically driven, receiving energy from a power car, a part of the locomotive.

With the ever increasing demand for controlled condi-

tions during transportation, the mechanical unit seems to be the answer. This may be another of those cases wherein the vision of pioneering men is being translated into a practical improvement for refrigerated transportation.

New Paints Will Help Control Mold



GUIDICE

mold growing on the walls and ceiling that must be washed off, and (3) returned goods from consumers which results in adverse customer reaction.

To eliminate all of these items, a plant must spend considerable money. With labor costs high, management is becoming more interested in paint used to protect the walls and ceiling from this mold growth which contaminates the air, and eventually contaminates the product.

The following factors must be considered in selecting the proper fungicide to put into paint (paint companies commercially compound this material in paint): 1) Toxic to all types of fungi, but not to man in the concentrations used; 2) Harmless to the material to which it is applied; 3) Tasteless and odorless; 4) Acceptable to government regulatory agencies, and 5) Does not give an unpleasant color to the paint.

During our work numerous compounds have been tested, but the only one that met with the greatest acceptability was Cunilate, which is solubilized copper-8-quinolinolate.

We arrived at this conclusion after considerable laboratory and plant level test work.

LABORATORY TESTS: Whenever we received a commercially fungicided paint we tested it. A paper strip was dipped into the paint and hung on a string line to dry for at least 24 hours. It was then placed in a plate that contained agar medium for mold growth.

A mixture of four different molds was sprayed over this surface in a concentration of at least 100,000 spores per ml., by an atomizer, and this covered each corner and the center of the plate. This figure was an arbitrary one, and is believed to be accurate for this work. The plates were incubated at 30° for four days, and then at 25° for two months. At the end of each period, photographic records of mold growth were taken.

While these tests were going on we would have a panel painted in our test area to see what the results would be under actual working conditions.

PLANT LEVEL TESTS: Two separate areas about 2 x 2 ft. are used for each paint tested, one being cleaned of any mold and dirt, and the other being left as is before the paint is applied to the surfaces.

The paints we used were of great variety. Some were especially formulated for cool refrigerated areas, others for warm, damp (non-refrigerated areas) and the number

of different fungicides tested were numerous. A paint containing only one fungicide in a predesignated concentration was used, and many of our tests were with the same fungicide but in different concentrations in each gallon of paint. This gave us enough variety of types of fungicides to test, as well as an indication as to which one and in what concentration would be most effective.

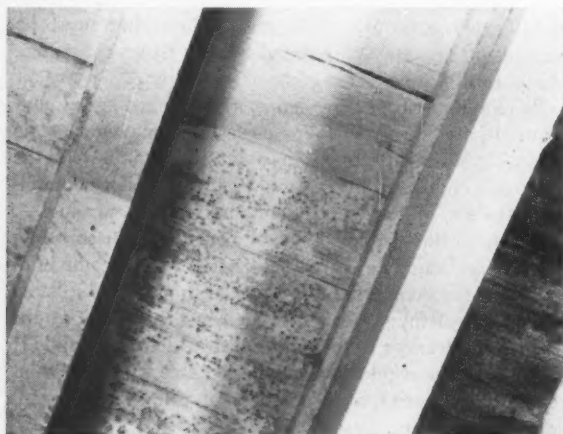
The group tested included Salicylanide, tetrachlorophenol, Phenyl mercury naphthenate, Chlorphenol, quaternaries, copper-8-hydroxy Quinolinolate and Cunilate. The only fungicide that met with all our requirements was Cunilate, and we have recommended that 10 fluid ounces of Cunilate be commercially added to a gallon of paint. However, there are indications that we will be able to reduce the amount of Cunilate.

We have been using this type of paint in many of our units with a maximum of success in preventing visible

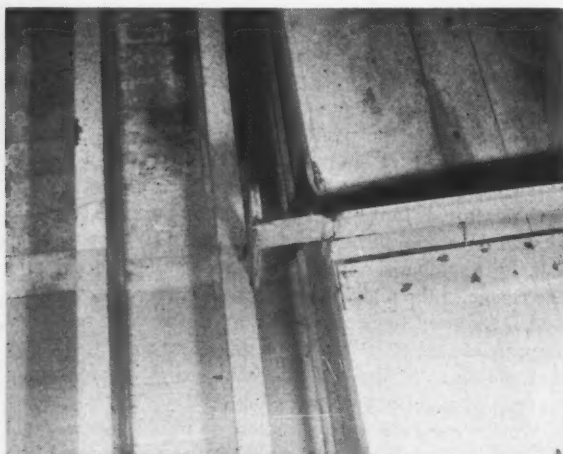
mold growth. The longest test has been going on for 21 months and no visible mold has grown, whereas an area located right next to it painted at the same time with paint containing no fungicide, was covered with mold in three months.

The painting should be done in the same manner as normally, that is (1) remove all product from the room that may be susceptible to odor, and (2) properly prepare the surface before painting. To prepare the surfaces: a.) Kill all the visible mold by soaking for 20 minutes with a 0.5 per cent solution of Chlorine; b.) Wash that off as well as the rest of the area that may be dirty, and c.) Scrape off flaking paint.

We do not say this method will eliminate mold problems 100 per cent but it will, and has been, a major step in that direction. Its application is practical and it has helped reduce costs.



THIS PICTURE IS a closeup view and shows the fine mark of the mold breakoff.



THIS PICTURE SHOWS panels put on during January, 1951, to test actual results under plant use. Both panels were put on at the same time and the surfaces were washed and cleaned of mold and dirt. The upper portion was painted with paint containing no fungicide at all, and the lower portion was covered with paint containing 10 percent Cunilate. Mold started to grow on the upper portion eight weeks after painting, and in three months the surfaces were completely covered with mold. No mold has grown on the lower surface, with the exception of a very small spot in one corner, and this seems to be the result of a paint failure.

Silicone Quiets Foam in Rendering



STEBELTON

PROBABLY EVERYONE here has heard of the word "Silicone."

This word is one that the advertising men have been playing up considerably in the last year or two. To the layman the word brings to mind silicone car polishes, furniture polishes, sight savers and possibly paint, where silicones are used in formulating special properties into these products. To chemists the word brings to mind a whole series of new chemicals based on a silicon-oxygen network rather than the carbon structure which is common to the familiar organic chemicals.

This still does not tell what silicones are, and I shall try to explain it briefly. As I mention, they are silicon-oxygen combinations. But unlike their close relative, sand, the skeleton is modified by the presence of organic materials which are chemically attached to the silicon element.

By selection of the type of organic material, and by controlling the degree of modification, it is possible to produce materials which may be fluid by nature, resinous or rubber-like.

The fluids can be used as they are or compounded into greases, polishes, etc. The resins can be used as vehicles in paints or as binders for molded or laminated "plastic" items. The resins may also be used as electrical impregnating materials.

The rubber-like material can be molded, extruded or calendered the same as any of the organic rubber products you may know.

A new material is always interesting, particularly if it offers properties unobtainable in any other known material. Such is the case with the silicones. They offer the following characteristics which make them usable in spite of their relatively high cost per pound: Excellent electrical properties, extreme resistance to oxidation, excellent resistance to heat, excellent water repellency, ex-

cellent resistance to weathering, release properties, relatively slight change in physical properties over wide temperature changes, high order of incompatibility with conventional organic materials and very low order of toxicity.

Of possible interest to you men in the meat packing industry are the heat resistance, electrical properties and water repellency of silicones. These properties allow a silicone-insulated electric motor to run under continuous overloads of 50 to 100 per cent with no damage due to heat. Also such insulated motors have excellent resistance to severe moisture conditions.

The last two properties, high order of incompatibility and low order of toxicity, are the reasons for my being here. It is due to the very high degree of incompatibility that the silicone materials work as defoamers. Since they are non-toxic they can be used in many food products.

We have developed a silicone material, Dow Corning Antifoam A, in which the defoaming action is enhanced to the point that in many stubborn cases of foam, only one to two parts per million completely kill all foaming tendency. An excellent example of this is where Dow Corning Antifoam A is used to control foam during the rendering operation. Details of this use are as follows:

In one rendering plant, they were continually fighting foam. This necessitated careful watching and removal of the heat when the foaming got out of hand. Considerable time was lost, to say nothing of the material which was lost due to foam spilling over the vessel.

Antifoam A was used to combat this trouble. It was found that merely by spreading a small amount on the inside of the vessel, the foam would rise to this level, contact the silicone and subside—never to rise again! It was found that one application was good for five batches.

The advantages obtained are as follows: 1.) Larger batches possible, 2.) less labor, 3.) less processing time, 4.) no material lost in processing and 5.) better product results.

In another application, Dow Corning Antifoam A is used to control foaming during dehydration of fats and oils. Normally, during the open pan drying the oil is heated to expell the moisture. As the moisture content is



1. Bill Hann, sales manager, Superior Packing Co., St. Paul; Moe Kadish, partner, Kadish & Milman Beef Co., Boston; Norman Appleyard, jr., P. G. Gray Co., Boston; Bill Kenney, president and treasurer, Geo. Bancroft & Co., Lawrence, Mass.; Roland B. Hall, owner, R. B. Hall, Inc., Lynn, Mass., and Dick Loewenstein, vice president, Superior Packing Co., Chicago.

2. W. C. Mahoney, Chicago; S. J. Warren, Minneapolis; F. I. Ryan, Chicago, and A. R. White, Chicago, all of the Cudahy Packing Co., casing division.

3. FIRST ROW: Dan Summer; Paul Rosenfeld, president, and Kurt M. Georgi, salesman. SECOND ROW: A. Schwam; M. D. Mainster and Stanley J. Cohen, all of Sayer & Co., Newark, N. J.

4. Bill Berger, vice president, Chicago; L. A. Curran, Canadian manager, Toronto; E. H. Oppenheimer, president; H. Barney, vice president, New York, and Steve Greenfield, New York, all of Oppenheimer Casing Co.

5. R. A. Wahlberg, M. C. Dakin, Chas. F. Mayer, president, and H. J. Addison, all of H. J. Mayer & Sons Co., Chicago.

6. M. J. McNery, Traver Corporation, Philadelphia; W. J. Connolly, Wilson & Co., Inc.; George Gersony and Paul Strauss, Gersony-Strauss Co., New York, and Vincent J. Sheridan, Traver Corporation, Chicago.

reduced, there is a tendency for foaming.

To control this, an operator is required to keep careful check of the heating rate and in spite of this precaution occasionally there is a serious foaming with the result that there is an overflow and loss of fat. Addition of a few drops of Dow Corning Antifoam A completely eliminated the trouble.

The benefits achieved are as follows: 1.) No water in final product, 2.) shorter drying time, 3.) larger batches, 4.) no foaming of product in customer's plant, 5.) tank cars can be loaded faster due to lack of foaming and 6.) less labor.

Thousands of other instances of controlling foam have been reported. These include the use of Antifoam A in making glues and adhesives, in cooking resin varnishes and in asphalts, paints, motor oils, etc.

Machinery Lifts Beef



GARAPOLO

Lugger's Load

MECHANICAL BEEF LUGGING, an operation dreamed of by beef men for years, is now a reality.

This portable equipment handles any weight beef from the rail into freight cars or trucks without the use of men of extraordinary size and strength.

The devices, which we call the beef lugging equipment, have been perfected by the packing industry's well known Walter J. Richter, and are marketed through his company, the Rockford Equipment Co., U. S. Yards, Chicago. They have been used successfully in the Chicago plant of Wilson & Co. since January of 1951 and are now in use at most of the other Wilson plants.

The beef lugging equipment consists of two major parts: the lowering arm and the lugging buggy.

The lowering arm is a device which consists of a main

frame upon which a pair of flanged rollers are mounted to allow the assembly to be moved along the rail to any desired position. Two quick locking means are provided to keep the device firm on the rail. One of these locks prevents longitudinal movement and the other insures a positive rail lock.

The arm proper is mounted on a shaft with a pivoting principle. The leading edge is wedge-shaped and is similar to the edge of the rail in width and terminates at the other end in a hook-shaped curve. This arm is so arranged as to receive the roller of the trolley with the hind quarter of beef. When the trolley roller engages the lowering arm and rolls past the point of pivot, the added weight on the arm causes the arm to start its downward motion and continue until it nests in the curved end of the arm. The arm stops when it is in a position vertical to the floor. The hind quarter is then approximately the same level above the floor as was the forequarter. The hindquarter and trolley is then ready to be taken off.

A safety guard rail is provided to keep the trolley moving with the diverting contour of the arm proper.

The downward swing of the arm is controlled through a self-contained hydraulic system. This system consists of a cylinder with a line connecting the two opposite ends. In this line are two valves, one a self-closing valve which allows free flow in one direction and manual hold control in the other. The other valve is free flow in one direction and manual adjusting release in the other direction. The combination of these two valves allows the adjustment of rate of speed in which the arm is lowered due to weight of cattle and the holding of the arm during the removing of the trolley and hindquarter.

The lugging buggy is a carrying and lifting device consisting of a rear swivel three-wheeled cart, with two upright extending posts, load carry pan that slides up and down on the upright posts, handle, and a hydraulic system. This buggy is manually pushed and the hydraulic system is employed for raising and lowering the load carrying pan.

In operation, the operator needs only to push the buggy to the forequarter and raise the specially shaped load carrying pan by means of the hydraulic system until the neck portion of the forequarter rests in the pocket of the pan.

The U-shaped bar between the two upright posts cradles the balance of the forequarter allowing the operator to



LEFT: The hydraulic dropper which lowers the quarters of beef into the buggy which transports them from dock to car hook. The dropper arm is lowered by the weight of the carcass acting against hydraulic force and automatically locks in down position until quarter is lifted by the beef buggy. RIGHT: In loading a car, the employe pushes the quarter-carrying buggy into the reefer. Rubber tires, with swivel rear wheels, make movement easy and versatile.



move the forequarter into the freight car after it is cut down from the hind. The hindquarter, which is still on the rail, is then pushed on to the lowering arm as mentioned above. The loin portion of the hindquarter nests into the same pocket as did the neck portion of the forequarter, and the hind leg portion rests in the U-shaped bar.

The hydraulic system of the buggy contains a 6-volt electrical system, hydraulic pump and a hydraulic cylinder. The cylinder is enclosed in one of the upright posts.

The buggy operator pushes the buggy into the freight car or truck and into a position to allow the quarters of beef to be properly loaded. Operating the hydraulic control lever will raise the load pan easily to allow the car hook to be properly placed in the rib of the forequarter or the gam of the hind.

For constant moving and proper gang balance, two or more of the buggies should be used with each lowering arm.

The compactness of both of these mechanical units lends itself to great maneuverability and works out well with almost any loading condition. The lugging buggies are also being used to unload cars and trucks with very satisfactory results.

The equipment needs very little maintenance with the exception of battery charging and wash up of the buggies after each day's use.

Watertight Floor Is No Easy Task



EVERDS

THE PRINTED NOTICES on the subject I will discuss might lead you to think you will hear about something entirely new to make concrete floors leakproof.

Let me say at the outset that such is not the case. My discussion will deal rather with the precautions required to make floors tight by using known methods of construction.

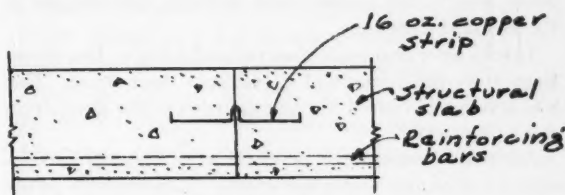
Leaky concrete floors are a great source of trouble. One might naturally feel that it should be relatively simple to render concrete watertight with the numerous compounds manufactured for this purpose.

Some of the manufacturers will even give a written guarantee on the finished concrete floor if their materials are used under their supervision. However, this guarantee will contain a clause which reads about like this: "This guarantee is null and void if cracks develop in the concrete."

DENSITY: Almost anyone can pour a watertight concrete floor if it doesn't crack. It is necessary to use a good, dense mixture. A concrete mixture which is lean should never be used around a packing plant. It may have the required strength for its structural duty but it will not have the essential impermeability. Moisture will readily penetrate a lean concrete mixture and will build up a layer of rust on the reinforcing steel. This will eventually result in spalling concrete.

For this reason, in packing plant work it is good prac-

tice to avoid specifying concrete by the strength desired only, such as "2000-lb. concrete." This concrete might have the necessary structural strength but the mixture used to obtain that strength would be left entirely to the contractor. By reducing the amount of water used in



SECTION THROUGH CONSTRUCTION JOINT.

the mix, the specified strength can be secured with a very lean concrete which will also be a very porous concrete.

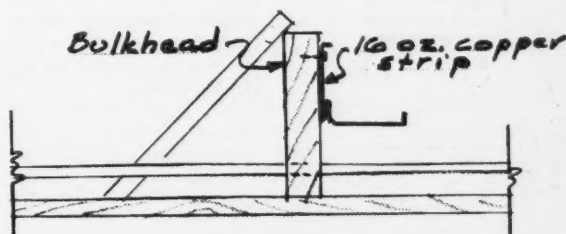
It is also necessary to require a certain minimum mixture such as one part of Portland cement to six parts of well graded aggregate. This we know will give a dense watertight concrete. It is realized that this often results in a concrete having several times the required structural strength.

Admixtures for concrete are manufactured by a number of firms. These go under trade names such as "Pozzolith," "Celite," etc., and are often advantageous in securing a dense concrete. The admixture acts as a flux and tends to eliminate voids. They also have been found to be advantageous in reducing shrinkage cracks.

The cost of these admixtures can usually be offset by a slight reduction in the amount of cement required for the mixture. No admixture, however, takes the place of thorough mixing and careful placing of concrete. The use of power vibrators in placing concrete helps to eliminate voids.

SHRINKAGE: One would naturally assume that the improvements which have been made in the manufacture of Portland cement in recent years would make it simpler to secure watertight concrete. The opposite appears to be the case. True, today's cements are more finely ground, give greater strength and set up more rapidly. But along with these improvements has come the problem of greater shrinkage. Contraction of concrete, resulting in cracks, is the big problem in securing watertight concrete.

Many concrete floor slabs which were poured 20, 30 or 40 years ago are still giving good results even though no provision was made to render them watertight. Today,



DETAIL OF COPPER SEAL, SHOWING METHOD OF PLACING IN FORMS.

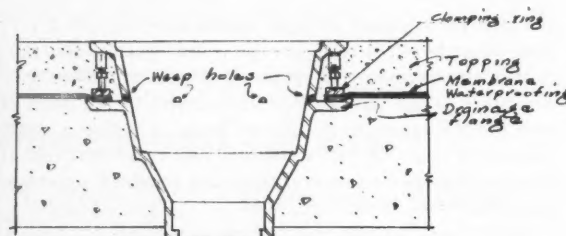
a concrete slab poured in one locality may be watertight whereas a concrete floor of exactly the same mix in another locality may develop cracks and leak. This is due to the variation in the shrinkage of the cements used and

to the variation in the aggregates which are available.

There have been instances where a rough concrete slab showed a series of cracks extending entirely through the slab the next morning after it was poured. Tests of the aggregate showed twice the permissible amount of stone dust in the crushed rock and this had resulted in the unusual shrinkage.

Cracks have also been observed radiating in four directions from the corners of a cast iron floor drain. This was apparently caused by the expansion of the floor drain due to hot water.

Adequate temperature reinforcing is essential in concrete to minimize shrinkage cracks. Construction joints in concrete slabs need special attention to prevent subse-



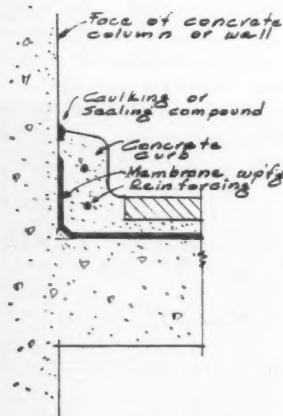
SECTION THROUGH FLOOR DRAIN.

quent leaks. An "Ironite" wash applied to the edge of one pour, before the next pour is made, is quite effective.

The Ironite tends to rust and seal the joint after shrinkage occurs. Another method of sealing the joint is through the use of a formed strip of copper cast into the concrete. This must be soldered at laps.

However, the fact remains that you can take every precaution to secure a watertight concrete slab and still you are liable to have leaks.

MEMBRANE: The best assurance of having a watertight floor is to install a membrane waterproofing over the structural concrete slab. The minimum protection which should be used consists of two plies of 15-lb. as-



DRAWING SHOWS the method of sealing the waterproofing where it terminates against a wall or column. The waterproofing should be carried up back of the curb and the joint between the curb and the wall should be sealed.

phalt saturated roofing felts and one ply of asphalt saturated cotton fabric which acts as reinforcement.

The felts and fabric should all be solidly mopped with hot asphalt of a low melting point which is self-healing. For very wet floors, such as killing floors, a waterproofing consisting of three or four plies of felts plus a membrane is recommended.

The waterproofing for floors which may be subjected to considerable temperature change should have a "slip sheet" over the finished waterproofing before the concrete topping is placed. This consists of two plies of building paper laid dry to break the bond between the waterproofing and the topping. This avoids having cracks in the topping transmitted through the waterproofing.

Waterproofing must be carefully installed. Attention must be paid to details or you can have leaks even with the membrane waterproofing. For instance, it is essential to seal the waterproofing against all floor drains and against walls, columns, sleeves or other points of termination. If this is not done, water can get under the membrane and may find a place to go through the concrete slab.

Floor drains should have drainage flanges with weep holes and should have clamping rings to secure the waterproofing. The clamping ring should be heated to the temperature of the hot asphalt and then drawn in place with the clamping nuts. This will soften the asphalt and provide a better seal.

Care must be taken to keep the weep holes open. These take care of seepage around the drain and are added insurance against the possibility of water backing up between the slab and the waterproofing in case it is not tightly sealed to the drain flange.

The waterproofing must also be carefully sealed where it terminates against walls, columns, pipes or sleeves. At columns and walls, a curb should be installed to protect the waterproofing and the waterproofing should be carried up back of the curb. The joint between the curb and the wall or column should be sealed.

This seal can consist of a good grade of elastic gun grade caulking compound or of Para-Plastic sealing compound. The Para-Plastic is a rubber-like composition which is heated and poured into the joint and which will bond to dry concrete. Where waterproofing terminates against round columns and against sleeves, a clamping ring may be used to secure it.

Care must be taken where holes are cut through waterproofed floors for pipes or other purposes, or the value of the waterproof membrane may be lost. In locations such as this, the finished floor must be cut back and thorough job of flashing performed.

As you see, building a watertight concrete floor requires care. Good judgment is needed to decide upon which floors should be waterproofed and also the degree of waterproofing required. For floors receiving a minimum amount of water, such as beef sales coolers, a good concrete floor slab will suffice.

Floors which receive more water require additional provision to render them watertight. The degree of watertightness depends somewhat on the amount of money you wish to spend or can afford to put into the construction of your floor.

For when you use a membrane waterproofing, it is not only the cost of the waterproofing that must be considered, but also the cost of a heavy reinforced concrete floor topping above it, plus the increased cost of the structure itself due to additional dead load.

I trust that from these comments you have gained some ideas which will be helpful. If anyone desires the name of the manufacturers of special products mentioned, I will be pleased to supply it.

LIVESTOCK



"Increasing Livestock Production through Disease Control" by Dr. Robert Graham — "Are Meat and Livestock a Political Football" by W. R. Poage — "Raising Pigs on Synthetic Milk" by Dr. H. G. Luther and Keith E. Myers — "Antibiotics and Carcass Quality" by Dr. Robert H. Grummer and Dr. Joseph M. Pensack.

Save Livestock; Feed More People



GRAHAM

FOOD IS ONE of our most essential commodities. Without it none of us could long survive. Many countries of the world already lack sufficient food to supply their people's needs. Our own population is in-

creasing so rapidly that the Bureau of the Census estimates that by 1975 the United States will have 190,000,000 people. But we are 23,000,000 acres short of having enough land to produce the food needed to feed that many people.

What is the answer? Since it is not likely that we can increase our food supply by adding acres, we must do it by other means. We must do it by improving our methods of producing and marketing food products, by developing new products, by eliminating waste and by reducing losses of food from all causes, including animal disease. This task presents a challenge to both agriculture and industry.

The know-how to make maximum use of our available food supply must come from strong, forward-looking programs of research. We must look to research specialists in nutrition, physiology, chemistry, genetics and pathology working in the fields of animal, dairy and poultry science to search out new facts and develop improved methods and procedures that can be applied to the grass roots. It is the responsibility of the public to provide the facilities that will make this research possible.

I propose here to mention briefly a few of the more important animal diseases and to try to show how the veterinarian fits into this research program to meet the increasing demands for food and to translate the results of the research to the farmer. The achievements to date are too numerous to mention. But we are still not doing enough.

To show the trends in this direction, I call your attention to the new federal foot-and-mouth disease research laboratory on an island off the eastern coast, as well as to the six new state-supported colleges of veterinary medicine. These new colleges are in Georgia, Missouri,

California, Oklahoma, Minnesota and Illinois. Together with the new veterinary school at Tuskegee Institute, they are designed not only to train veterinarians, but to assume the additional responsibility of developing research and service programs to supply new knowledge in the prevention and control of animal diseases. These activities in veterinary education and research extend into and overlap human health—directly insofar as animal diseases are communicable to man, and indirectly through the utilization of techniques that can be employed interchangeably in animal and human medicine.

The College of Veterinary Medicine at the University of Illinois is designed primarily to aid Illinois farmers in their fight against livestock diseases by training competent veterinarians and by activating research and extension programs and diagnostic and animal clinic services. Established in 1944, the college accepted its first class of 24 students in 1948. These 24 students, the first veterinarians trained at the University, were awarded the D.V.M. degree on June 15, 1952. This is the only class entering the University in many years to graduate intact.

In connection with the teaching program, the college operates a diagnostic laboratory and a clinic. Last year, the diagnostic laboratory examined more than 5,000 animals to determine the nature of their illnesses and blood-tested more than 80,000 cattle, swine and turkeys. In the clinic and hospital, 10,256 cattle, horses, swine, sheep and dogs were examined and treated for various ills.

Two extension veterinarians, working with farmers, farm advisers and practicing veterinarians, promote numerous meetings on livestock diseases.

Approximately 40 veterinary research studies are now being conducted by the college and the experiment station to uncover better methods of fighting animal diseases. These studies involve work in the following diseases, which I shall mention only briefly:

Bovine Leptospirosis: Bovine leptospirosis, a contagious disease, was first recognized in cattle in Illinois in 1947. During the past five years it has been diagnosed in eight counties in our state. All clinical outbreaks have not been confirmed by laboratory diagnosis, and the extent of the disease remains unknown.

The causative agent of bovine leptospirosis is a spirochete (*Leptospira pomona*) which appears capable of in-

fecting man, sheep, horses, dogs and swine. In cattle it may be acute, subacute or chronic. Calves suffering from the acute type may die soon after showing symptoms. Loss of appetite, constipation, anemia and a slight to high temperature are the usual symptoms.

Milk production declines in lactating animals, and the milk is often blood-tinged and viscid. Pregnant animals may abort. Blood in the urine is common in affected calves and may also be noted in adults. Icterus is not uncommon in the more advanced stages of the disease. Mild cases of short duration followed by recovery, as well as rapidly terminating fatal cases, have been reported. Cows suffering from the subacute form of the disease may recover slowly without treatment. Recovered animals may be carriers.

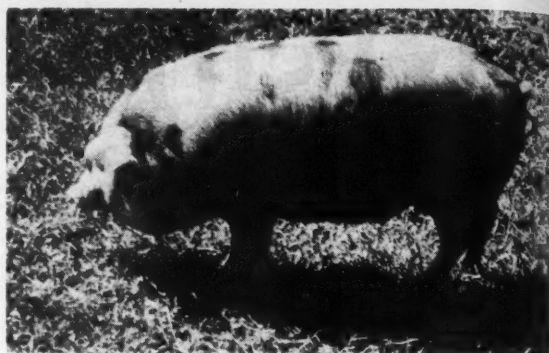
Diagnosis can be made by demonstrating leptospirae in the tissues of fatal cases or in the blood, milk and urine of animals in the early stages of the disease. The complement-fixation or agglutination-lysis test is employed to detect carrier animals. When leptospirosis is suspected, it is necessary for the veterinarian to collect blood samples from each animal for laboratory tests. Affected animals should be isolated and general sanitary measures put into effect.

Treatment of acutely affected animals with penicillin is usually successful in reducing mortality, especially in young animals. Further research leading to the development of programs of control is urgently needed.

Vesicular Exanthema in Swine: Twenty years ago a new virus disease made its appearance in a California herd of garbage-fed swine. Last June the disease was reported by the federal bureau in a shipment of infected animals to a midwestern state. In mid-June cases were discovered in New Jersey, Iowa, Nebraska, Missouri and Kansas. Outbreaks were also identified in Arizona, California, Utah, Oregon and Washington.

The symptoms of vesicular exanthema are similar to those of the dreaded foot-and-mouth disease of cattle. Watery blisters develop on the snout, lips, gums or teeth or around the feet of the hog. Nursing sows may have lesions on their teats and udders. Affected animals lie down and refuse to eat. Death losses are highest in suckling pigs. In growing pigs gains are reduced and sows may abort. Hogs that recover are resistant to attack for several months.

At present, raw garbage is thought to be the primary factor in the introduction, perpetuation and dissemination of vesicular exanthema. No immunizing agents are now



RESULTS OF ANTHRAX IN A SOW.

available. For this reason, it seems that complete extermination of the disease is necessary in order to protect the swine industry.

The outbreak of this highly contagious disease prompted the following recommendations by federal and state livestock sanitary officials:

1. All exposed or sick hogs on premises where infection has been discovered should be shipped immediately to federally inspected packing plants. All meat products and scraps from these animals must be subjected to heat to insure killing the virus.
2. Infected premises should be kept free of swine until they have been cleaned and disinfected.
3. Hog raisers feeding garbage should be required to cook the garbage at temperatures high enough to kill the disease virus.

A concerted effort is being made by state and federal officials to trace all sources and check further spread of vesicular exanthema by holding affected hogs in quarantine until proper disposal can be made. Farmers are urged to cooperate with their local veterinarians and with state and federal officials in diagnosing all outbreaks and in employing quarantine measures to keep the disease from spreading. Hog owners and practicing veterinarians have been informed through the press, radio and professional journals of the importance of reporting any illness resembling vesicular exanthema.

X-Disease in Cattle: Sometimes described as hornyskin disease, or hyperkeratosis, this disease was first recognized in 1941. Serious losses of meat, milk and other animal products in almost every cattle-producing area of the United States are attributed to this malady, which runs a chronic course of several weeks to a few months.

The exact cause of X-disease has not been determined. It is apparently caused by a toxic factor or factors and may occur at any season of the year and under variable conditions. Some chemical substances are capable of producing the disease, but it is not known at present whether any of them are the cause of natural cases. There is some evidence suggesting that the growth of microscopic organisms on feedstuffs may produce substances capable of causing the disease.

The symptoms of X-disease are lacrimation, diarrhea, salivation, impaired appetite, loss of weight and thickening of the skin in the poll, neck and withers. Red proliferative areas may appear on the tongue, lips and muzzle. Some animals may become blind. Young stock are more susceptible than adults. Severely affected ani-



DERMATITIS BEFORE TREATMENT. (X-DISEASE)

imals usually die, and abortion is not uncommon among breeding animals.

X-disease has been produced experimentally by feeding (1) certain alfalfa pellets; (2) a processed concentrate and fractions of this concentrate; (3) one lot of wood preservative; (4) a particular lubricant containing chlorinated naphthalene, and (5) a particular crop of timothy hay.

These findings suggest that a variety of substances may become contaminated with some hyperkeratosis-producing compound and that the disorder may be caused by several compounds or even several groups of compounds rather than by a single substance.

Prevention requires keeping animals from consuming or coming into contact with the toxic factor. While this factor lowers the vitamin A content of the body tissues and fluids, administering vitamin A does not prevent the disease from developing in experimental cattle. Low vitamin A reserves do, however, hasten development of X-disease.

Anthrax in Swine: One of the oldest and most destructive diseases of animals, anthrax recently assumed a new pattern affecting swine in Illinois and other midwestern states. It started in August 1951 and reached its peak in March 1952. During the past year, more than 129 outbreaks (principally in swine) occurred in more than 40 Illinois counties. Over the 11-year period from 1939 to 1950, only ten outbreaks were recognized in cattle, swine and horses in eight Illinois counties.

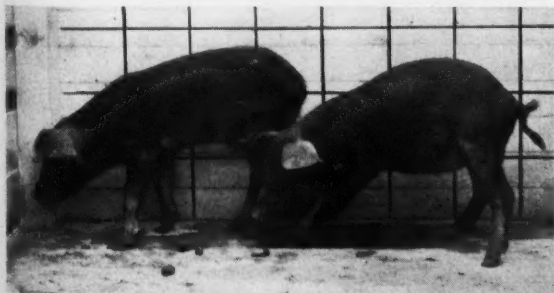
Anthrax is also communicable to man. From both an economic and a public health standpoint, it is a dreaded disease.

The evidence indicates that the 1951-52 outbreaks are probably traceable to the feeding of imported contaminated bone meal. This source of anthrax has been checked, if not entirely eliminated, by the reprocessing of raw imported contaminated bone meal, and it is hoped that federal and state regulations may ultimately prevent further outbreaks.

Anthrax spores are highly resistant to chemicals, heat, drying and cold; they can live for many years in contaminated feedlots and pastures, ready to strike at any time. The disease may be peracute, acute, subacute or chronic.

Animals with the peracute form die suddenly with little warning of illness. The acute form usually ends in death in one or two days. The subacute form may lead to death in three to five days. Chronic anthrax lasts for several days and may be followed by either recovery or death.

Anthrax-contaminated farms are subject to quaran-



BACITRACIN THERAPY—UNTREATED AND TREATED PIGS.



COLLECTING MILK FROM CANS IN BRUCELLA RING TEST.

tine. Owners are urged to cooperate with the local veterinarian and state and federal livestock sanitary officials. If an animal sickens suddenly and dies, the owner should not skin or handle the carcass. Dead animals, their discharges, contaminated bedding and manure should be burned. Barns should be disinfected with a 5 per cent solution of sodium hydroxide. Animals on contaminated premises should be protected by vaccine and penicillin therapy.

Regulatory officials of the state departments of agriculture and the U.S. Department of Agriculture, cooperating with the feed industry, have developed regulations designed to prevent outbreaks of anthrax by: 1. Preventing the sale of anthrax-contaminated bone meal; 2. Burying carcasses deeply or burning them, and 3. Disinfecting rendering plants and trucks.

New Hog Cholera Vaccines: During the past year the new hog cholera vaccines have been used on an increasing number of herds with apparently favorable results. Critical tests on farm-vaccinated animals, wherein the immunity status was determined by injection of lethal amounts of hog cholera virus, have shown that a very high percentage of animals subject to inoculation have proved resistant to the disease. These findings confirm the original laboratory tests on these products.

The advantages of injecting anti-hog cholera serum simultaneously with the new vaccines in establishing an early immunity have also been demonstrated. These encouraging results present the all-important question: Can hog cholera be prevented by discontinuing the use of virulent virus in permanent immunization of swine?

If supporting evidence of this premise is accumulated in the field under farm conditions, a forward step will have been taken in the control of hog cholera, with great savings to the swine industry.

Experimental Bacitracin Therapy in Swine Dysentery: Results of experimental sulfathalidine therapy in natural outbreaks of porcine necrotic enteritis (necro) at the Illinois Agricultural Experiment Station were reported in 1945. In 17 herds including 707 naturally affected pigs, 88.8 per cent made satisfactory recovery, while 11.2 per cent (79) died or failed to respond to treatment. The

survival rate among the treated animals was about four to six times that of the untreated control animals.

In these same studies it was observed that sulfathalidine and other sulfa drugs failed to alter the course of swine dysentery appreciably in naturally affected herds. During the summer of 1949, a serious outbreak of dysentery in the University herd presented another opportunity to observe the results of sulfa drugs, bacitracin, and sodium arsanilate on the course of swine dysentery. Results of treating 146 swine with sulfa drugs, sodium arsanilate and bacitracin, are summarized in Table 1.

Table 1. Experimental Therapy in Natural Outbreak of Swine Dysentery in the University of Illinois Swine Herd, 1949

Group	Pigs	Weight (lb.)	Treatment	Recovered	Clinical results	Died or destroyed
1b	20	35-45	Sulfathalidine 1/4 lb. per 100 lbs. feed for 8 days	8 (40%)	O	12
2b	19	35-45	Sulfamethazine 1/2 lb. to 250 lbs. feed for 8 days	11 (57%)	O	8
3b	19	35-45	Controls—no treatment	9 (47%)	O	10
4c	26	35-125	100,000 units bacitracin orally per day for 6 days	25 (96%)	M	1
5c	18	35-125	Sodium arsanilate 2.1 gr. arsenic per gal. for 6 days	15 (83%)	S	3
6c	20	35-125	50,000 units bacitracin orally per day for 6 days	16 (80%)	M	4
7c	24	35-140	Controls—no treatment	10 (41%)	O	14

a Three weeks following treatment. O—no improvement; S—slight improvement; M—marked improvement.
b One-fourth of the pigs showed bloody diarrhea, weakness, and loss of weight at beginning of treatment.
c All pigs showed bloody diarrhea at beginning of treatment.
d Expressed as metallic arsenic.

Brucella Abortus Ring Test: This test, commonly called the ring or ABR test, is a pooled milk agglutination screening test to determine the incidence of brucellosis, or Bang's disease, in dairy herds. It is another diagnostic aid to be used judiciously with the blood serum agglutination test in the brucellosis eradication program.

The test was first described by Fleischhauer in Germany in 1937. Hence it is sometimes known as the Fleischhauer test. The term ring test results from the fact that a colored layer or ring forms on top of the sample when the test is positive. More recently, a modification of the test has been proposed. Because capillary

glass tubes are used, this test is known as the capillary tube test.

In the ring test, the milk from each herd is sampled from the can at the farm or upon delivery to the receiving station or creamery. Hence, the pooled milk is tested from several cows and not from individual animals. A positive reaction means that there are probably one or more reactors in the herd, but it is not conclusive evidence. To establish positive proof and detect the infected animals, it is necessary to follow the ring test with a blood serum agglutination test of all animals in the herd.

The chief advantages of the ring test over the now-used official serum agglutination test are economy and speed. The ring test makes it possible to screen a large number of herds in a minimum time with less labor and at lower cost. Herds can be retested at shorter intervals, and negative herds can be rechecked at lower cost. Major effort can thus be concentrated on the blood testing and follow-up of infected herds.

The ring test has certain recognized limitations. It is not a reliable test for detecting individual infected animals. In addition, the infection rate may be delayed or losses in weight may occur, depending on the severity of the outbreak. Infected animals sneeze and have a nasal discharge which is sometimes tinged with blood. In the advanced stages, a deformity of the nose and face may also be detected.

All pigs showing symptoms of rhinitis are capable of transmitting the disease, especially to nursing pigs, and all pigs from litters affected with the disease are potential carriers. Recovered pigs from contaminated premises may serve as a source of infection when placed in non-infected herds. Brood sows that go through an outbreak unaffected are not proved carriers, but these animals should farrow in isolation to avoid contact with infected nursing litters. Affected animals should all be isolated.

The best way to control infectious rhinitis is to market the entire herd, clean and disinfect the premises, and not restock for several months.

In summary, the need for more effective application of existing federal and state programs for the control of animal disease is recognized. These programs, if expanded and more vigorously carried out, could greatly reduce the present losses from animal disease and thus increase the incomes of farmers and at the same time add to the human food supply.

At the farm level, there is need for greater recognition of the carrier feature of animal disease, as well as the value of simple, inexpensive measures of sanitation, such

LEFT: J. R. Holmes and Adam Wilson, both of fire protection and safety engineering, Armour and Company, Chicago; Henry Tefft, American Meat Institute, and Alex Spink, safety director, Kingan & Co., Indianapolis.

RIGHT: At front is Alex Lavenberg, Berth, Levi & Co., New York. Left to right are Joseph M. Dziminski, president, and Valentine Niezgoda, general sales manager, Pasco Meat Products, Inc., Buffalo; Carl Schultze, partner, New Hampshire Provision Co., Portsmouth, N. H., and F. J. Potts, manager, eastern division, Custom Food Products, Inc.



as clean herds, clean pastures, clean barns and clean feedlots. The feeding of balanced rations will also help to reduce losses due to parasitic and contagious diseases. These things are the cooperative job of the farmer and the veterinarian.

To state it another way, we need to repeat and re-emphasize, at the farm level, such essentials of good livestock management as:

1. Good breeding and sound feeding.
2. The value of antibiotics, vaccines, serums and chemicals. These, and other aids, should be regarded as supplements to—not substitutes for—good management.
3. The purchase of healthy animals for herd replacements and the quarantine of newly purchased animals to curtail the danger of spreading infection. Breeding herd replacements is a step in the right direction.

Finally, if disease strikes, an early diagnosis is essential. The need for and value of professional service in this field is widely recognized.

The greatest hope of overcoming the numerous unsolved problems of livestock disease lies in expanding programs of veterinary research. The results of effective research programs conducted on a teamwork basis will add to our present knowledge by finding new and better methods for the control of animal diseases that may have far-reaching effects in the field of human health. The outlook for larger accomplishment in this work is most encouraging.

"Whipping" Beef Won't Produce More



POAGE

THE AMERICAN Meat Institute represents the one vital and absolutely essential bridge between the livestock producer and the meat consumer. Your plants are generally located in cities. Your raw materials

come from the ranches and the farms. Your markets are in every crook and corner of this broad land. As middlemen, you have been suspected and have been criticized from both sides; yet, I have an idea that this criticism but testifies to the efficiency of your service.

If you were as effective in keeping the price of live animals down as most of my cowmen friends claim, I am sure that every consumers' organization would be found erecting plaques at the front door of your plants. That these consumers are just as critical as are the producers must indicate that you have sought profitable markets for the ranchmen as well as the cheapest possible meat for the city dweller.

As I see it, you just got into the game too late. The livestock man may never have enjoyed much in the way of price, but throughout history he has occupied a social position far above the humble tiller of the soil. The history of the first family records the jealousy of Cain against his stock-raising brother.

The good Book also tells us that some time later a "sod



ALEX MCCREA, president, Ohio Provision Co., Cleveland; Wilfred C. Cooper, president, F. B. Cooper Co., New York; R. J. Gunderson, president, Roberts & Oake, Inc., Chicago; Henry Merkel, president, Merkel, Inc., Jamaica, N.Y., and J. Seeley, vice president, Roberts & Oake.

buster" by the name of Abraham "put one over" on his old father Isaac, and purported to be a man of the chase. Yes, there is abundant evidence that the tiller of the soil never received the same recognition accorded to the grower of livestock. But I find no early reference to the meat packers—what a pity!

Had ancient Palestine and Arabia boasted modern slaughtering and refrigeration facilities, I doubt very seriously that either our Jewish or our Moslem friends would have found pork so objectionable. Thus is the history of the world changed. The hot climate of the Middle East made it impossible for those early people to use pork products safely. Had the modern meat packers been on the ground, doubtless we would today have a much larger market for pork, with a lesser demand for beef. Mr. DiSalle might have never been able to make beef the symbol of high prices, and you might very likely have been spared this speech.

I do not need to point out to you packers that meat, and particularly beef, has been deliberately made a "whipping boy" by those who want to control prices just for the sake of control.

Mr. DiSalle was very frank about that. He has said in so many words that beef was a symbol, and that he was going to roll back the prices of beef regardless of how many it hurt, or how few, if any, it helped. While before our committee on May 7, 1951, he said that his entire stabilization program would go by the board if he did not succeed in controlling the price of beef, he made no such statement in regard to the price of bread. And yet, for 2,000 years, bread has been called the staff of life—right down to the day Mr. DiSalle substituted beef.

Having decided that the price of beef was to be symbolic of his effort to roll back the economic seas, and to make water run uphill by virtue of an act of Congress, it was but a logical step to make beef the public whipping boy of the Office of Price Stabilization. I must confess that Mr. DiSalle did a thorough job of whipping, but I think that he and his associates somewhat underestimated the boy they undertook to whip.

He got away with a part of his rollback program during the summer of 1951 through a nationwide pressure campaign on the conferees after the House had voted to prohibit rollbacks on beef. He and his followers convinced a great majority of the people, and a smaller



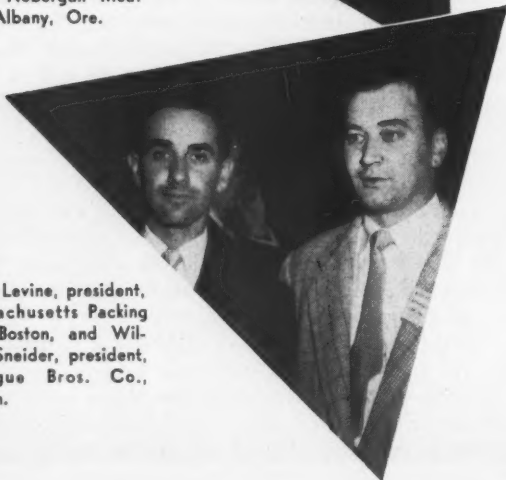
Chuck Husting, vice president, Leo Burnett Co., Chicago, and Tom Wallace, sales promotion director, Peters Sausage Co., Detroit.



H. A. Morgenstern, provision department, and George Schlereth, H. H. Meyer Packing Co., Cincinnati.



H. J. Horton, John E. Smith's Sons Co., Miles City, Mont., and D. E. Nebergall, president, D. E. Nebergall Meat Co., Albany, Ore.



Eldon Levine, president, Massachusetts Packing Co., Boston, and William Sneider, president, Sprague Bros. Co., Boston.

majority of the Congress that we should have price controls and rollbacks on beef. We got them, to the injury of the producers of cattle, but without a corresponding benefit to either processors or consumers.

It was easy for the OPS to show that the price of beef was high in 1951. For that matter, although OPS with a very considerable assist from the southwestern drouth has been able to wipe out about one-third of the value of the cowmen's herds, the retail price of beef is still high in terms of dollars. But so are all other prices. At the time this attack began, cattle prices were just over four times what they were during the base period. That sounds bad if one does not look any further. But if he does look further, he will find that at the same time factory wages were five and one-half times as much as they were during the base period. And as all of you will remember, during that very period, the wages of the workers in the packing plants were increased by 9c per hour. Actually, what Mr. DiSalle did was little more than to take 9c per pound from the producer and give it in the form of a wage increase to the workers. The average consumer has never been able to see any reduction in her butcher bill. But, in order to prove that he was really whipping the bad boy, Mr. DiSalle broke many a cowman whose only crime was that he had tried to produce the kind of food the American people wanted.

Now let us look at the record. In the first place, our consumption of beef in America had been steadily increasing, both in total volume and on a per capita basis, for many years prior to OPS. Never had the American people eaten so much beef. In 1950, we Americans consumed 144.5 lbs. of meat per capita, and 63 lbs. of this was beef. Ten years before, we had consumed only 54.7 lbs., and when beef was really cheap in 1930, we had consumed only 48.6 lbs.

From these figures, it is plain that the demand for beef is and was at an all-time high. This demand could not have reached such a high figure if the price of beef had been as badly out of line with other prices and wages as OPS tried to make us believe.

Actually, while beef was and even now is still high in terms of dollars, I want to make the flat statement which cannot be contradicted that beef is not high in terms of working time required to buy it. And in the long run, that is what counts.

Again let us look at the record of the past. In 1909, the beginning of the base period, the average laborer in an American factory could buy only .9 of a pound of round steak for the proceeds of one hour's work—steak was cheap in 1909, but so was labor. Today, and last year, with all the loose talk about the high price of beef, the average American factory worker can buy 1.5 lbs. of round steak with one hour's work. That represents a 60 per cent increase in the amount of steak the worker can get for one hour's work.

Put another way, it means that a pound of round steak costs the worker 40 per cent less effort today than it did in 1909. Therefore, I ask you, I ask any honest man in the OPS, is round steak actually too high today? Does anyone seriously believe that if the price of beef was so out of line with the purchasing power of our people as OPS would like to have us think, that the American people would continue each year to buy more and more beef



LEFT: E. Kopp, chief engineer; C. Bonifield, vice president in charge of production; L. R. McQueen, sales manager; R. L. Gambill, executive vice president, and C. E. Gambill, president, all of The Globe Company, Chicago.



RIGHT: John C. Milton, American Meat Institute; W. F. Schluderberg, president, The Wm. Schluderberg-T. J. Kurdle Co., Baltimore; Ben Solomon, meat buyer, Herman R. Silver, vice president, and J. Goldberg, all of Food Fair Stores, Philadelphia; E. E. Schwitzke, secretary, Trunz, Inc., Brooklyn, and Wells E. Hunt, president, John J. Felin & Co., Philadelphia.

and buy less and less pork and wheat flour, both of which have been selling below parity?

I want to mention the effect of price on production in a moment, but first let us look at the theory of price control. Sometimes a patient gets so sick that the doctor gives him a harmful drug like morphine to deaden the pain while he tries to effect a cure through other means. Doubtless there are times when the commercial body of a country must resort to economic morphine, but it can no more live on a continual diet of morphine than can the human body. Price controls are economic morphine. They do not cure inflation. They only deaden our awareness of its hurt. They cannot promote production which is the only real cure for inflation. Like morphine, their use can be justified only in the most serious case of emergency. They are never justified simply to make jobs or to establish the power of the government to control the lives of its people.

In fact, the basic difference between the economic system of private property on the one hand and of Communism on the other is this: In the private property system, price is used both to encourage the production and the distribution of goods and services. In the Communist system, goods and services are produced under threat of punishment and are distributed by government edict.

The argument of the planners is that the government (acting, of course, through bureaucrats) is more intelligent and fairer than is any individual. Even if we accept that premise—and I do not—it must be pointed out that under the free price system the distribution is not made on the basis of the judgment or the promises of any one individual, but that the market price is the most accurate index of the views of all individuals which man has yet been able to devise. This is the great fact which is so deliberately and repeatedly overlooked by all the plan-

ners, including all the Socialists and all the Communists.

Now let us see if the price of meat ever got so out of line with disposable income as to justify the claim of OPS that its entire stabilization program would break down if it were unable to roll back beef prices. In 1951 meat sold at retail accounted for 5.4 per cent of the American peoples' disposable income. In 1947 our people had spent 6.4 per cent of their income for meat. Ten years earlier they had spent 5.6 per cent and ten years before that they had spent 5.6 per cent. In fact, present expenditures for meat, when based on a percentage of income, are close to an all-time low.

Can it be that meat producers are robbing the public when they are supplying more meat and taking a smaller part of the consumers' income than ever before? Can it be that the OPS and the consumer organizations want livestock growers to realize less and less while consumers acquire more and more with which to buy other goods and services?

In August of this year, the Department of Labor published a table showing the earnings of workers in manufacturing industries, both in terms of current dollars and in 1939 dollars. This shows that in spite of all of the griping and all of the talk about increased food costs, the purchasing power of the weekly take-home pay of the worker with three dependents was actually 1 per cent higher this summer than last summer, and that it was 9.5 per cent higher than in 1947 when agricultural income hit its peak and was 32.9 per cent higher than it was in 1940. Remember, these are the figures of the Department of Labor, and they show take-home buying power after all taxes and deductions have been figured. And they include only straight time—no overtime.

Of course, there is no such thing, and never can be such a thing, as too much meat. I once asked an eminent meat authority how much meat he thought the American people would consume. He replied, "All we produce." This is literally true. American consumers want meat—they want beef, and over the years they will buy all that is produced, and they will pay whatever they have to pay to get it.

What, then, is the answer to cheaper meat? Obviously, the answer is more production. We may be approaching the limits of our production of feed grains, but, in my opinion, we have not begun to realize the potentialities of livestock production from pasture. But it costs money

to improve pastures. These pastures will be improved and cattle production will be increased if the cowman can feel even reasonably assured that he will reap a fair return from that investment, but he simply won't make the needed investment if he is continually held up to public scorn and threatened with repeated rollbacks.

I believe that there is no segment of our population more ready than is the farmer and the livestock man to work on hope. He will take his chances on drought. Even when he knows the weather records, he always relies on a rain. It always comes, but is sometimes two or three years late! He will take his chances with blizzards and with predatory animals, but when these two-legged predators come around with the power of government to guarantee that he is certain to make no profit, I am not at all sure that even the cowman from the mesquite range will retain his hope and courage.

There are but two ways of securing the production of food anywhere. One is the American way, the Democratic way of free enterprise. It is based on the hope of rewards. It relies on the opportunity or at least the hope of the producer that he will receive an attractive price. This system has worked successfully. It has produced food everywhere it has been used. It is the system that enabled the United States to serve as the "bread basket" of the democratic world during and following two World Wars.

The other system is the Communistic way—the system of all dictators. It is based on the fear of punishment. It relies on the power of the state to punish the farmer in case he fails to produce as abundantly as some bureaucrat feels he should. The Communists assign quotas. They say, "Bring in 200 bu. of wheat at harvest time. It is not our concern how you get it. If you grow it, fine, but if the drought, the flood or the grasshoppers come, that is your hard luck. But it is still up to you to deliver the wheat or go to jail." This system has never gotten the

desired results, even in Russia. I don't believe it will ever work.

My friends, if we are to avoid the pitfalls of Communism; if we are to fight the cause of inflation, rather than its symptoms; if we are to increase our meat supplies; if, in the long run, we are to reduce, and not increase, the price of beef; we must encourage the cowmen to produce and the packer to process more and more beef. We will never attain these goals by making a "whipping boy" of beef.

Synthetic Milk Cuts

Early Pig Losses



LUTHER

PROBABLY THE first question which many persons would ask on this subject would be: Why raise pigs on synthetic milk, rather than follow the conventional procedure of suckling on the sow?

For a number of years, pigs have been raised on synthetic milk in university laboratories. In these instances, the reason for the use of synthetic milk was mainly for the purpose of determining the nutritional requirements of the newborn animal.

Research work on synthetic milk of this nature has been conducted by many universities for a number of years dating back as far as 1939. In the last year, much has been added to the findings of early experimenters. Most of this work, however, has been done on a laboratory scale and has been conducted with the use of highly purified and expensive ingredients which would not be feasible for the commercial raising of pigs on synthetic milk.

In addition, most of this work has been conducted under carefully controlled laboratory conditions which could not be employed in commercial practice. One obvious conclusion, however, can be drawn from this work. It is possible successfully to raise baby pigs at a good rate of gain on synthetic milk products as a substitute for sow's milk.

When one reflects on the high mortality of 30 per cent which accompanies the raising of baby pigs even under modern farm practices, it is amazing that the swine industry has survived thus far as a profitable enterprise. The possibility of reducing this high death loss by the use of synthetic milk would be a welcome relief to thousands of farmers.

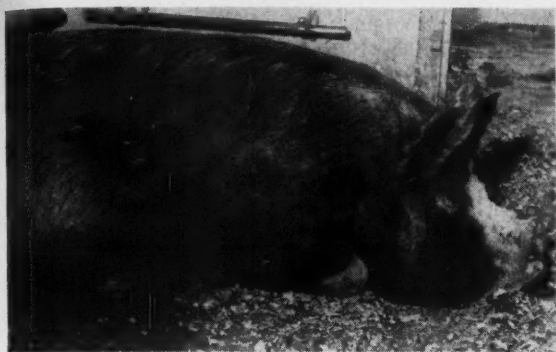
Most of these losses occur in the suckling period and the major losses during this critical period have been attributed to crushing by the sow, disease and inadequate nutrition. Certainly a nutritionally adequate synthetic milk should provide the answer to a large part of this problem.

Approaching this question from an entirely different angle, nutritionists have found that we have been able to make dramatic advances in the feeding of chickens, turkeys and growing and fattening hogs by the addition of low levels of antibiotics to the ration of these animals.

One significant observation has been that the major improvement occurs during the early growing period of



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SOW CRUSHING HER BABY PIG.

the animal. In the case of the baby pigs, as contrasted to poultry, we have not in the past had any effective means of getting antibiotics to the animal during this early growth period as the sow is the only source of food.

There are two methods, however, whereby this might be accomplished; one by feeding large levels of antibiotics to the sow and the second by the use of antibiotic implants and injections. The first method is costly and impractical as extremely high levels are required. The second method is presently under investigation.

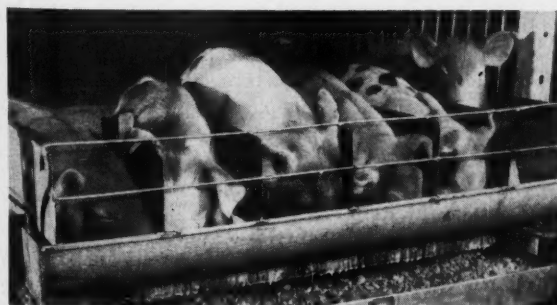
The use of synthetic milk, however, offers a natural approach to the introduction of effective levels of antibiotics to the ration of the baby pig during this early critical period.

In our research work at Chas. Pfizer & Co., Inc., on the raising of pigs on synthetic milk, we largely confined our activities to the use of synthetic milk formulations which were practical on a cost basis. We have raised many animals under practical conditions which are routinely encountered on the farm.

In our first formulations, we employed normal feed ingredients with due consideration to solubility as well as cost, palatability and nutritional value. Our first studies included the use of manifold nipple feeders which we soon discarded as an unnecessary refinement.

It was obvious to us after the first few tests that management and feeding methods were probably the major factors in the success or failure of our feeding tests. In order to obtain reproducible results which we could use for research purposes, we found it necessary to standardize on the feeding and management conditions to avoid getting entirely different results from the feeding of any one milk at different places under different conditions.

I cannot overstress this point for it is of cardinal im-



TERRALAC-FED PIGS IN BATTERY.

portance. Briefly, it is highly essential that baby pigs be kept warm and dry and receive an adequate quantity of food.

After some preliminary work, we took synthetic milk out into the field to see what conditions would be met in practice. Our results in these tests range from excellent to very bad, the difference being largely attributable to management conditions at the respective farm. After spending a few days and nights in cold, windy barns, I realized that it was not at all practical to attempt to heat such structures and for this reason we attempted to minimize the area to be heated and reduce renovation costs by placing baby pigs in converted poultry batteries.

Under the conditions in our laboratories, this proved to be highly satisfactory. We raised pigs in an extremely confined area at a rate of 100 per month, maintaining them until they were off liquid feed in a period of about four weeks. This method of feeding in converted cages has some advantages in that it makes it possible to confine the area in which the pigs are kept and more easily control the temperature conditions. It should be clearly understood, however, that these batteries are only a means of obtaining good management at minimum cost.

We have found, as have others in the field, that raising baby pigs under floor conditions is a completely satisfactory procedure provided the requirements for sanitation and temperature control can be observed. As a matter of fact, most of the studies which we now conduct at our research farm and laboratories in Terre Haute, Ind., are run under floor conditions. However, we have a large amount of space suitable for this work in contrast to the extremely small laboratory space available when we first started working in this field.

One extremely important factor in the feeding of pigs on synthetic milk is the use of a proper feeding device. It is very necessary that the feeder be so designed that it prevents the baby pig from stepping into the milk; it should be equipped with guard rails to accomplish this end and to provide individual stalls. Naturally, all of the equipment should be so designed as to facilitate cleaning.

The synthetic milk which we have used in the field has been designed for feeding after a minimum of two to



FLOOR-FED SYNTHETIC MILK PIGS.



THIRTEEN-WEEK pigs: One on left is synthetic milk fed and weighs 113 lbs. Pig on right is sow-fed and weighs 89 lbs.

three days at which age the pig has obtained an adequate supply of colostrum from the sow. On the basis of a large number of tests, we find that the baby pig has a requirement for colostrum which is not presently supplied by the use of any synthetic milks.

While it is true that in a number of instances baby pigs can be taken from the sow at birth and raised on synthetic milk, the possibilities of successfully raising under these conditions are very poor. We have been doing considerable work with colostrum substitutes and have found that cow's colostrum cannot be substituted. However, there is some promise in the addition of gamma globulin fractions from blood.

This work is difficult to perform as baby pigs do not drink by themselves from the trough immediately after birth. While colostrum substitutes may be possible, their use under farm conditions may be impractical.

In our early work on formulation of Terralac, we first attempted to duplicate as closely as possible the composition of sow's milk, which is 18.5 per cent solids, 6.6 per cent protein, 5.6 per cent fat, 0.95 per cent ash and 3.5 per cent sugar.

Subsequently, we evaluated some of the assumptions we made, basing our composition on sow's milk as a criterion.

Fat Level: Sow's milk runs approximately 30 per cent on a dry basis. While we initially compounded Terralac to contain 30 per cent fat, our subsequent evaluations showed that the amount of fat does not appear to be very critical as animals perform favorably at lower fat levels. We have subsequently studied feeding fat contents of 3, 8, 10, 15, 18 and 30 per cent. We found that under our conditions, the animals grew at all levels of fat supplementation.

It was interesting to note that the fat content had an appreciable effect on feed efficiency and allowance was made for caloric content. At the higher fat levels, approximately 30 per cent, the animals did not show as good feed efficiency as was obtained when approximately 10 per cent fat content was fed.

Solids: The sow gives milk of approximately 18 per cent solids and the solid content remains essentially unchanged during the suckling period. We have fed Terralac at solid levels of 8, 12, 14, 16, 25 and 30 per cent. In general, the rate of gain is directly proportional to the per cent solids fed up to approximately 20 per cent. Above 20 per cent solids, the animals seem to have a somewhat poorer feed efficiency.

In practical feeding in the field, however, we have found that the per cent solids is an extremely important consideration. One cannot translate directly the experi-

ence in the laboratory to that found in the field. Under certain conditions, we have found that animals tend to overeat. This may be due to palatability, accessibility of the milk in the feeders, etc.

We have found that it is desirable to feed at a somewhat lower solids content for all animals in order to avoid the possibility of overeating by some. At the present time, on our formulation, we find the feeding of six parts of water plus one part of milk, approximately 14 per cent solids, to be desirable for field use.

Actually it would probably be desirable to start animals out at a somewhat lower solids content, approximately 12 per cent for the first few days on synthetic milk and gradually build the solids up. However, this is not at all practical under commercial conditions as the farmer would have to feed various ages different dilutions of the milk.

Protein: Knowledge of protein needs of baby pigs has not progressed to the point that it is as well known as protein requirements for other animals. In the formulation of synthetic milk, it is possible that proteins other than skim milk may eventually form a large part of such products.

Antibiotics: In our research work on synthetic milk, we have conducted a number of tests to evaluate the effect of different levels and types of antibiotics. We have evaluated the use of Terramycin, Penicillin, Bacitracin and Rimocidin. Our best results were obtained with Terramycin. In general, we would say that our experience in the feeding of baby pigs appears to parallel that obtained in the feeding of antibiotics to growing and fattening hogs in which the best response was obtained with Terramycin.

In studying possible levels of antibiotic addition we fed 0, 5, 12, 25, 50 and 150 milligrams of Terramycin Hydrochloride activity per pound of feed solids. On the basis of these results, approximately 25 mgs. per pound of feed is a desirable level. However, conditions are occasionally encountered in which the use of higher levels of Terramycin gives better results.

There is no doubt in our minds that the use of antibiotics should be an essential component of skim milk. We noted significantly reduced mortality rates and markedly increased rates of growth when Terramycin was added. In synthetic milk one has the luxury of being able to have all the vitamins and minerals which the nutritionist feels desirable.

The exact requirement in most cases is not known; however, it is usually possible economically to add liberal quantities. Based on the composition of colostrum, we have elected to add high levels of Vitamin A and C to the milk. Terralac contains, in addition, high levels of ascorbic acid, thiamine, riboflavin, niacin, pyridoxine hydrochloride, calcium pantothenate, inositol, choline, para-aminobenzoic acid, vitamin K, folic acid and biotin activity, as well as other unidentified factors furnished by the basic ingredients. Terralac is comprised primarily of skim milk, lard, fish solubles, lecithin and brewer's yeast, in addition to vitamins and minerals.

In order that the use of synthetic milk be practical, it is obvious that it must be economical. One of the important factors in the economical feeding of a synthetic milk is the use of a highly palatable, nutritious pig starter. The use of a nutritious, palatable creep should

be an integral part of the feeding program. A palatable creep will be consumed in significant quantities after the pigs are one week of age. Therefore it carries a good portion of the nutritional load.

We have elected to use a highly palatable creep which contains high levels of antibiotic. The following tables give the formulation of the creep rations we employed in our early work. Table I gives the composition of a mixed creep. Table II gives the composition of a pelleted creep.

TABLE I

Oat Groats	1,000 lbs.
Ground Corn	380 lbs.
Meat Scraps	180 lbs.
Dried Skim Milk	100 lbs.
Dried Whey	80 lbs.
Fish Solubles	70 lbs.
Dried Yeast	60 lbs.
Fish Meal	40 lbs.
Bi-Con TM-5	10 lbs.
Vit. and Min. Suppl.	5 lbs.
Steam Bone Meal	5 lbs.
Bi-Con 6 Plus	3 lbs.
Soybean Oil Meal	60 lbs.
Iodized Salt	7 lbs.

TABLE II

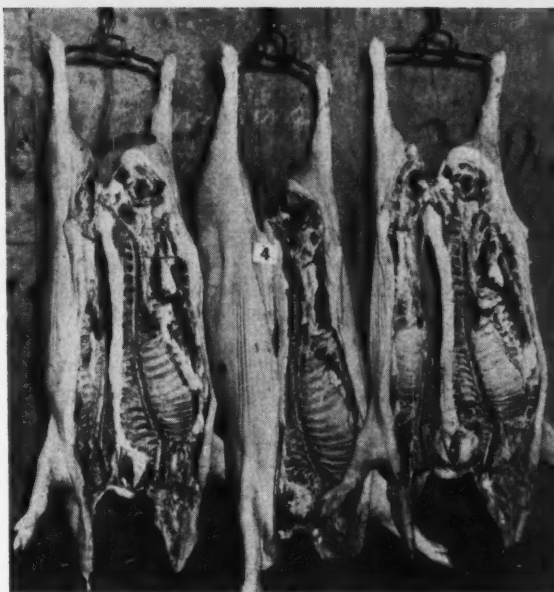
Oatmeal	900 lbs.
Ground Corn	300 lbs.
Meat Scraps	180 lbs.
Dried Skim Milk	110 lbs.
Alfalfa Meal	100 lbs.
Dried Whey	80 lbs.
Fish Solubles	70 lbs.
Molasses	70 lbs.
Dried Yeast	60 lbs.
Fish Meal	35 lbs.
Bi-Con TM-5	10 lbs.
Salt	7 lbs.
Steam Bone Meal	5 lbs.
Bi-Con 6 Plus	3 lbs.
Vit. and Min. Suppl.	5 lbs.

The vitamin and mineral supplement employed in both the above formulations contained: Sufficient Vitamin A to give 2,500 I.U. Vitamin A/lb. finished feed; sufficient Vitamin D to give 500 I.U. Vitamin D/lb. finished feed; 200 mg/lb. of riboflavin; 300 mg/lb. of pantothenic acid; 600 mg/lb. of niacin and 6,000 mg/lb. of choline, plus adequate amounts of iron, copper and trace quantities of cobalt, zinc, manganese, etc.

Work done at the University of Illinois has clearly shown how palatability affects the consumption of creep rations. By the use of these nutritious, palatable creeps, the quantity of synthetic milk required can be reduced to a minimum and consequently feed costs are reduced.

One of the obvious economical advantages of feeding synthetic milk is the possibility of early slaughter of sows which would not be rebred or the early re-breeding of sows when fed synthetic milk.

Obviously, a large number of animals must be included in rebreeding studies in order that the figures have any statistical significance. On the work conducted to date, we have found that animals rebred in two weeks after



CARCASSES OF HOGS FED SYNTHETIC MILK.

weaning showed an average litter size of 8.29 as compared to 8.2 for a control group indicating no effect of early rebreeding on the size of the litter.

In the limited work which we have conducted to date, we studied rebreeding after animals have suckled pigs from zero to five days and find that there is no apparent effect of weaning time on size of litter or on time of rebreeding. In our tests to date, we have found that most of the animals rebred in a period of approximately ten to 12 days after weaning.

This differs from some of the preliminary work reported by others where they have studied rebreeding at three days after weaning. We are continuing these tests at our research farm and will shortly have additional data on this point. The early rebreeding or slaughtering of the sows must form an integral part of the synthetic milk feed program for the overall economics of raising pigs on synthetic milk.

In practice, synthetic milks have found very varied response. It is not unusual to find one farmer feeding pigs with the milk and getting excellent results, whereas his neighbor, feeding the same lot of material, will have fair to poor results. The need for direction, sanitation and good management cannot be overemphasized.

This means adequate temperature control, freedom from drafts, adequate facilities for keeping pigs dry, etc. In practice, synthetic milks are being used in a number of ways, either as a replacement for the sow at two to three days of age or for orphan pigs and oversized litters and in other instances as a supplement to sow's milk.

The age at which a farmer will take a pig away from the sow can understandably vary with the management practices of the farm. We have found it desirable to make a supplementary source of synthetic milk available to baby pigs after they are one to two days of age and allow for a gradual transition of the baby pig from the sow to synthetic milk feeding.

Synthetic milk feeding is a relatively new venture which like all other new developments is often beset with

many problems before a complete solution is achieved. Unless a farmer is prepared to incorporate all the required management practices into his operation, synthetic milk should not be employed.

If, however, he elects to use the synthetic milk in a modified form, such as by supplement feeding, he naturally does not have to follow all of the rigid sanitation and management practices, which are required when pigs are taken off the sow at an early age. Observance of proper management conditions results in a considerable reduction of losses in young pigs. The following are typical results which have been obtained in the field:

Weeks	Weight Terralac Fed	Weight Sow Fed
0	2.8	2.8
1	4.3	4.9
2	8.0	7.8
3	12.5	10.7
4	17.0	13.4
5	22.2	15.9
6	28.3	19.0
7	34.9	23.0
8	40.9	28.1

The successful use of synthetic milk also allows for taking advantage of the improvements made in genetics since heretofore the lactation ability of the sow has often been the governing factor in breeding programs.

We have used Terralac in a number of animals in addition to pigs and find that the product designed for pigs gives excellent response in calves, sheep and mink. We have even used it as a ration for racoons, possums and tiger cubs.

With all the work which is being conducted on synthetic milks, I am sure that many of the problems confronting us will be resolved. Good practical farm management I am sure will answer many of the questions. I have found that some of the farmers using synthetic

milk have been successful in improvising and improving on known methods.

This type of development, together with the results of research laboratories, I am sure will shortly reduce the cost of feeding and eliminate many of the management problems. The fact that many persons are obtaining such good results is proof that this method of feeding has a practical place in animal husbandry.

Do Antibiotics Influence Carcass Quality?



GRUMMER

THE SWINE INDUSTRY has passed many milestones since the first home-cured belly was exchanged for coffee and tobacco in the early development of our great country. It has enjoyed glorious progress with but few dark moments while growing into one of the nation's leading industries.

But pork is not the same competitor it was ten or more years ago, and much to the concern of the producer, processor and retailer, the swine industry today is not the "healthy baby" of a few years ago. Changes in consumer tastes, a growing popularity of sea foods and more efficient production of competitive meat products are just a few reasons for the sluggish acceptance of pork by the housewife of today.

The packing industry, the producer and the retailer are all to be commended for their efforts in improving retail pork products but much more progress is needed.

There isn't much question but that fat is the greatest deterrent to the sale of pork and a healthy hog market. Much research and education is necessary for the production of leaner pork products—research to learn more about the many intimate relationships between production factors and carcass excellence, and education to make the facts available to the producer and other interested groups.

Changes in the carcass can be effected either by alterations in the production-environment of hogs or by the selection and genetic improvement of our breeding stock. The latter is a slow process but has the advantage of permanently fixing desirable characters.

Researchers in animal breeding have made notable contributions during recent years through their investigations of production performance of swine, but little use has been made of carcass information in the genetic improvement of swine. This has not been due to a lack of appreciation of the importance of the carcass, but rather because of the lack of a workable method of using carcass data in a swine selection program. To use carcass information two major facts are necessary: namely, to know the heritability and the economic value of the important carcass characteristics.

Little is known about the inheritance of these characters, and the market value relationships among the various cuts and the same cuts of different weights vary from day to day. Furthermore, it is necessary to kill the



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hog to get detailed carcass information after which the animal isn't much good for breeding purposes. In spite of the necessary and unavoidable slow progress of animal breeding work, the geneticists are aware of the need to incorporate carcass values among the criteria used in the selection and improvement of swine.

The other alternative, that of changing the environment to increase the leanness of hogs, also has its share of headaches and here again little information is available to propose practical recommendations to hog producers. Such things as type of hog, kind of ration, level of feeding and weight at marketing have an influence on carcass quality, and it is reasonable to believe that the factors interact.

For example, the desirable market weight of one type of hog may be quite different from that of a divergent type, and the limited-feeding of one type of hog may be more economical than that of another.

Many hog growers are of the opinion that the fastest gaining hog is the fattest hog at market weight. While this may be true among a group of hogs of the same specific type and under the same environment, it doesn't necessarily mean that gain cannot be stimulated by changing the environment or type without adding a corresponding amount of fatty tissue to the animal body.

Type studies at the Wisconsin experiment station have shown that fast gain is not necessarily associated with a fat carcass. In fact, the reverse was found to be true. The long, rangy type that gained the most rapidly and efficiently yielded carcasses with the least finish and the greatest proportion of primal cuts. Each animal was removed from the experiment at approximately 210 lbs. of weight and yet the carcass grades varied from Medium to Choice No. 3 (USDA grades). All but one of the extreme type hogs produced a Medium grade carcass. But it should be pointed out that most of them nearly qualified for the Choice No. 1 grade, and under the grading system employed by many packing companies these carcasses would have been classified in the top grade.

According to the results of the Wisconsin work, variation in body conformation as judged by the eye may not necessarily mean large differences in carcass length. An animal that appears to be long of body on foot may have much of its length in the head and neck, with little length advantage from the first rib to the aitch bone. Details of the type studies are shown in Table 1.

Table 1—TYPE STUDIES

Items compared	Lot I Short chuffy	Lot II Intermediate	Lot III Long rangy
Av. daily gain, lb.	1.25	1.30	1.34
Feed per cwt. gain, lb.	387	390	367
Feed cost per cwt. gain	\$12.23	\$12.28	\$11.58
Av. length of carcass, in.	28.37	28.96	29.61
Av. length of leg, in.	19.99	21.28	22.04
% of live wt. in primal cuts	46.70	47.44	48.62
Av. fat back thickness, in.	1.88	1.78	1.48
No. in U.S.D.A. grades:			
Medium	0	0	14
Choice No. 1	5	11	1
Choice No. 2	7	3	0
Choice No. 3	4	0	0

Many swine growers follow some system of limited feeding of hogs during the growing and fattening period. Under certain farm conditions such a practice may be practical as well as advisable. Pigs that are farrowed late in spring or early summer may well be held back at a slower rate of gain, to be marketed at a time after the fall rush of receipts is over. It has been shown experimentally that limited feeding, within reason (not less

than 60 per cent of a full feed), is conducive to more efficient gains than is full-feeding. There is also a good possibility that hogs carried on a partial feed will produce superior carcasses, especially if they are on good pasture. One disadvantage of limited-feeding is that it almost dictates hand-feeding, which increases labor costs.

In a recent experiment at the Wisconsin station varying amounts of ground corn cobs and poor quality alfalfa were added to the ration in an attempt to accomplish restricted feeding while self-feeding (Lots 5, 6, 7, 8 in Table 2). USDA workers found that the level of protein in the ration had an effect on carcass quality which suggests another field of investigation for possible improvement of pork carcasses. Table 2 gives a summary of pig performance under several systems of feeding.

Table 2—FEED STUDIES

Items compared	Lot 1 Hand-fed 70% of lot 2	Lot 2 Basal	Lot 3 High Protein	Lot 4 Low Protein	Lot 5, 16% Corn cobs	Lot 6, 30% Corn cobs	Lot 7, 28% Alfalfa hay	Lot 8, 55% Alfalfa hay
Av. daily gain, lb.	1.15	1.40	1.41	1.41	1.41	1.28	1.29	.86
Feed per cwt. gain (minus cobs and alfalfa hay), lb.	367	385	384	400	400	367	336	331
Total feed per cwt. gain, lb.	367	385	384	400	435	558	463	698
Av. fat back thickness, in.	1.65	1.70	1.73	1.78	1.76	1.60	1.56	1.31
% live wt. in lean cuts (ham, loin, butt, and picnic)	35.4	33.6	34.7	33.0	34.1	33.5	33.8	33.1
U.S.D.A. carcass grades:								
Cull	1	0	0	0	0	0	1	3
Medium	1	0	1	1	1	1	1	4
Choice No. 1	3	6	4	4	3	6	6	0
Choice No. 2	3	1	2	3	4	0	0	0
Choice No. 3	0	0	0	0	0	0	0	0

Since the advent of antibiotics and their general acceptance by swine growers, much speculation has arisen over their effect on the carcass. Does a stimulation of rate of gain increase the fatness of the animal? The scarcity of information does not permit a conclusive answer at this time and the data now available suggest different responses at different experiment stations. Among others, the investigations at Indiana experiment station and



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some Canadian work indicate that while the antibiotics stimulate growth, at least a part of the added growth is in the form of fat.

On the other hand, the Iowa station reports that hogs stimulated by the use of antibiotics produced carcasses of equal quality to the slower-gaining hogs without antibiotics. Such differences in findings are to be expected when one considers that the hogs and environmental factors vary from station to station. Rather detailed carcass studies at the Wisconsin experiment station give conclusive evidence that the incorporation of antibiotics in the ration may even enhance the carcass properties while increasing the growth performance of the pigs. The details of a recent study are shown in Table 3.

Table 3—GROWTH PERFORMANCE AND CARCASS YIELDS OF PIGS FED AN ANTIBIOTIC AND VITAMIN B₁₂

Items compared	High Protein Ration			Intermediate Protein Ration			Low Protein Ration		
	Basal	Antibiotic	Antibiotic B ₁₂	Basal	Antibiotic	Antibiotic B ₁₂	Basal	Antibiotic	Antibiotic B ₁₂
Av. daily gain, lb.	1.56	1.57	1.76	1.45	1.74	1.73	.98	1.20	1.31
Feed per cwt. gain, lb.	374	349	355	399	350	352	490	463	450
Cost of feed per cwt. gain	\$11.13	\$10.37	\$10.56	\$11.40	\$ 9.98	\$10.04	\$13.58	\$12.84	\$12.46
Fat back thickness, cm.	4.34	4.93	4.47	4.72	4.70	4.78	4.72	4.57	4.80
% of carcass wt. in lean cuts	49.6	46.7	50.2	45.3	49.6	47.5	43.7	47.5	47.3
% of carcass wt. in primal cuts	63.9	62.2	64.0	61.5	65.1	63.6	58.9	62.7	62.1
% of trimmed loin	15.0	14.0	15.2	12.6	14.0	14.2	12.2	13.6	13.4
Carcass length, cm.	74	74	73	73	73	72	73	74	74

The results of this experiment would seem to be of significance because the antibiotic effect was studied under three protein levels of feeding and the type of hog used was an intermediate, meaty kind found on many midwest farms. The level of protein in the high-protein group was considerably above the recommended or required amount and it was on this level that the antibiotic alone apparently increased the fatness of the carcass. It was not due to the stimulation of growth because those hogs gained no faster than the unsupplemented lot.

The combination of antibiotic and vitamin B₁₂ on the high level of protein increased the rate of gain with-



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out affecting the carcass one way or the other. On the intermediate level (recommended level) and low level of protein, both common farm practices, the addition of antibiotic alone and in combination with B₁₂ increased the rate and efficiency of gain and at the same time vastly improved some of the important carcass characters.

It is of interest to note that while the length of the carcass was not affected, the percentage of trimmed loin was increased which suggests heavier muscling in the hogs given the antibiotic supplement.

The American hog producer is as much interested in such things as growth rate and cost of production as he is interested in carcass excellence, and that is as it should be. Therefore we need to supply him with information on how to produce the right kind of pork economically.

The meager amount of information presented here indicates that rate of gain, economy of gain and carcass excellence can go hand in hand.

However, many more investigations involving all types of hogs under all systems of feeding and management are necessary to answer the problems that exist and vary from one farm to another.

Antibiotics Implanted in Little Pigs



PENSACK

ANTIBIOTICS ARE IMPORTANT feed ingredients for modern swine feeds. Their use has resulted in faster and more uniform growth, in improving feed conversion, in stimulating feed consumption, in fewer runts, and in controlling certain forms of scours. These effects are greatest in young pigs.

Under practical farm conditions, the suckling pig has no opportunity to benefit from these advantages. It does not eat any appreciable quantity of feed during the first two or three weeks of life, and gets no antibiotics from the sow's milk. To supply this missing antibiotic, a simple method was devised. A small pellet of pure bacitracin is implanted subcutaneously near the base of the ear. Here circulation is poor, and the pellet is slowly absorbed furnishing the baby pig the necessary antibiotic during this critical growth period.

These pellets, each containing 1000 units of bacitracin and called *Bacigro* in the feed trade, produce a substantial growth increase in pigs at market weight. This growth stimulation was observed irrespective of the presence of antibiotics in the feed.

Results of two experiments conducted at our nutritional research farms are as follows:

NO ANTIBIOTIC IN FEED

No pellet	198.4 lbs.
Bacitracin pellet	212.1 lbs.

ANTIBIOTIC IN FEED

No pellet	187.9 lbs.
Bacitracin pellet	201.4 lbs.

In the second experiment the presence of antibiotic in the feed reduced the time for the pigs to reach market

weight by approximately two weeks. There also was a significant savings in feed per pound of gain.

In conclusion I can cite you a practical illustration of how *Bacigro* results are encountered even in the home.

Last night when reading aloud from *Mother Goose*, we turned the page to encounter a large pig going to market, and I read this familiar rhyme:

"To market, to market, a Bacigro'n pig,
From suckling to market weight, jiggety-jig!"

The book pictured the healthy pig at market weight. Now we shall demonstrate how it got that way. (*A demonstration of Bacination followed.*)

Synthetic Milk Needs Good Support



MYERS

TO THOSE WHO HAVE had experience with pigs, I need not tell them that pigs are rather difficult things to raise. They are difficult from the day they are born until the day they die.

The \$1,700 share of the national debt facing every child born in the United States today is a small problem compared to the problems facing a new born pig. Let's think of some of the hazards facing this pig. First of all, there is the problem of chilling, there is the danger of being stepped on or crushed by its own mother, insufficient milk or none at all, filth with the accompanying worm eggs to infest the pig with its very first mouthful of food, as well as a host of disease organisms and parasites all ready to pounce on this pig within the first few minutes after birth.

Nor do the difficulties end with the first few minutes of a pig's life. The danger of being stepped on or crushed remains for several weeks, insufficient milk is a problem, while the constant bombardment of disease organisms and parasites continues throughout the pig's life.

There are a dozen or more kinds of scours, flu, rhinitis, cholera, erysipelas, mange, round worms, necro, tape worms, enteritis, lice, bull nose, lung worms, and I don't know how many other troubles ready to attack without warning at any time.

The result is that out of every 100 pigs farrowed, fewer than 75 are weaned, while only 60 to 65 reach market. I sometimes wonder if these figures aren't a bit high, for

most of us hate to admit just how many pigs we actually lose. Considering all of the difficulties, perhaps the surprising thing is that as many reach market as do.

Because this pig is a rather difficult sort of thing, he has attracted a lot of well-deserved interest. He has attracted the attention of our agricultural colleges, private research workers and institutions as well as many others.

I have brought up this difficulty in the raising of pigs and the attention given to it to explain, in part, some of the problems encountered with a new product such as synthetic sows milk. In brief, farmers have been looking for some magic pill, powder, feed, mineral, drug or what have you to make this business of raising hogs more of a sure thing.

To many hog producers synthetic sows milk was that magic thing. Through a combination of perhaps over-enthusiastic newspaper and magazine writers, salesmen of synthetic sows milk, and the search of hog men to find the magic thing, many hog producers (I would include ourselves) allowed their imaginations to take over and forgot some of the fundamentals of hog production. We saw in synthetic sows milk something that wasn't there. I shall go back to that later on.

Now, briefly, here are some of our results. We started our first bunch of pigs on synthetic sows milk last winter. There were somewhat over 100 pigs in the group. They were the excess pigs from litters larger than seven per litter. They were taken from the sows at 48 to 96 hours of age. It was during the winter months and we followed the manufacturer's instructions to the very best of our ability.

If there is such a thing as beginner's luck I guess we had it. I have never seen such pigs. They were so fat they could hardly walk. While they were growing they also got wet and they scoured, but most important of all, they really grew. We were all enthused and were ready to remodel our entire setup. We lost only two or three pigs, and one of these was due to a castration injury. We had a real bunch of pigs, and the sows, with only seven

LEFT: In front are Marty Phee, sales, and J. E. Brown. They are backed by P. G. Phillips, southeastern division manager, and F. E. Dilger, sales, all of Custom Food Products, Inc., Chicago.

CENTER: Jake Buring, vice president, Nat Buring Packing Co., Memphis; John H. Boman, president, Jackson Packing Co., Jackson, Miss.; Don Barraca, Transparent Package Co., Memphis, and H. Barney, Oppenheimer Casing Co., New York.

RIGHT: C. B. Upton vice president & general manager; Leo Kraus, Joe Mellon and Roy Barnes, all of French Oil Mill Machinery Co., Piqua, Ohio.





TOP: John H. Payton, president; Lee Gabrielson, Robert H. Skadow, vice president, and Bill Payton, secretary-treasurer, all of Great Lakes Stamp & Manufacturing Co., Chicago.
CENTER: Fred and Mrs. Ohse, Ohse Meat Products Co., Topeka, Kan., and Mr. and Mrs. L. F. Wiedmaier, Falls City Meat Co., Falls City, Neb.
BOTTOM: J. D. Tranter, president; Mrs. Lee S. Worthington, secretary and advertising manager; T. O. Lester and R. D. Spitlen, all of Kold-Hold Manufacturing Co., Lansing, Mich.

pigs to look after, also produced a real bunch of pigs.

To save time I shall not tell you of several other groups of pigs on synthetic sows milk. They also were good pigs, but as I said, I guess there must be something to beginner's luck, for while these pigs were good, they weren't as good as the first lot. The death loss was somewhat higher but still was probably better than had the pigs been on the sows.

We were still enthusiastic and placed another group of over 100 pigs on synthetic sows milk. Unfortunately, this was about corn and soybean planting time. With only three men to look after 320 acres of land, including the planting of over 200 acres of corn and soybeans, a herd of 300 gilts and sows, over 500 small pigs from a few days of age up to eight weeks, and a bunch of steers on feed, we were fairly busy.

We were getting along fairly well until the hired man got sick. By the time we got more help we were in a mess—at least the pigs on synthetic sows milk were. We lost about 40 per cent of the pigs and it would probably have been best had another 20 per cent died. The remaining 40 per cent did not measure up to any of the previous groups.

After several weeks of trying to look after the livestock

alone, with the exception of some help in the morning with chores while my brother looked after the crops, I had lost some of my enthusiasm for synthetic sows milk. In fact, I almost lost some enthusiasm for raising hogs for a living.

Why have I told you all of this? Not to condemn synthetic sows milk, but to emphasize something that I believe that the writers, the salesmen, the manufacturers and those of us looking for this magic thing had overlooked. As I mentioned earlier, I think we saw something in synthetic sows milk that wasn't there. We saw synthetic sows milk as a substitute for certain fundamentals rather than as the supplementary aid which I believe it is.

Usually we think of success in the hog business being dependent upon: (1) Good feeding, care and management; (2) Good breeding, and (3) Disease and parasite control.

In my opinion, synthetic sows milk does not substitute for a single one of these fundamentals. In fact, based on our limited experience and observing the results of others, even more is demanded of the producer when it comes to feeding, care and management and disease control.

For example in this matter of feeding the importance of the creep feed takes on new significance. Nothing less than the best should be used.

Also, the matter of care and management. The lack of it was our problem with the last group of pigs. There are no shortcuts with synthetic milk. Within certain limits a drop in temperature of 10° overnight doesn't amount to much to pigs with a sow, but you let the temperature drop 10° with three- to four-day-old pigs on synthetic milk and you're headed along the road to failure. Let a feeder plug up or the electricity be cut off for 10 or 12 hours with no water for the sow and she'll still give milk, although not as much. The pigs will not suffer too much. In spite of all the things wrong with her, the sow does make up for some of our carelessness in care and management, particularly sins of omission.

I would also mention disease control. While I cannot prove this, I believe that disease control can be just as large a problem, or even a larger problem, than with pigs left with the sow. I refer especially to scours which seem to be a universal problem, particularly with pigs weaning at early ages such as 48 to 96 hours and some even older. Perhaps there are still substances in sows milk which haven't been found or duplicated that are the answer. My reason for believing this is based on the observation of pigs living under conditions of filth, etc. Under these conditions I guarantee it would be impossible to raise pigs on synthetic milk.

If we remember, then, that synthetic sows milk is not a substitute for the fundamentals of feeding, care, management, good breeding and disease and parasite control, and are willing to do nothing less than the best on each one of these, then I believe we are ready to use synthetic milk, and that synthetic sows milk will do everything claimed for it. As I see it, there are no half-way measures. It didn't work for us under half-way measures, and I know of many others who have had similar experiences. Perhaps with the exception of locating the substance in sows milk to which I referred earlier, I am of the opinion that for every problem caused by synthetic milk, there have been 50 due to lack of care and management.



Seymour Oppenheimer, president, Transparent Package Co., Chicago, with his brother, Edward H. Oppenheimer, president, Oppenheimer Casing Co., Chicago.

Where does synthetic sows milk fit into the picture for the hog producer, including both the farmer and the operator of the so-called pig hatchery? To me, there is no difference and, as I see it, their problems are the same. The goal of each is to make a profit. Profit in the hog business depends on quite a number of things, including such things as feed costs, number of pigs produced per sow, birth weight of the pigs, grain required per pound of gain, etc.

As I see it, each individual must determine for himself whether or not synthetic sows milk can be used in his hog production program. Therefore, I am going to attempt to present a chart that I believe might be of help in arriving at this decision.

Before doing so I would like to point out that I have purposely omitted details of how to use the milk, equipment, etc., for I believe that such information is readily available. I would say, however, that equipment does not have to be fancy or elaborate, but it must be able to do what is expected of it. I would use as an example the matter of heat. I don't think it makes much difference what kind of heat you provide just so it does what is required of it.

Now where does synthetic sows milk fit in your program? If you will assume with me a chart something like the following: To my knowledge no successful substitute for colostrum has been developed. Therefore, on the first day that a pig is removed from a sow after it is 48 hours of age and has had sufficient colostrum, the need for synthetic sow's milk is 100 per cent. Some time between the twenty-first and thirty-fifth day the pig no longer needs synthetic milk. Just to make this easy, we will say that on exactly the twenty-fifth day the pig no longer needs the milk. Assuming this, then, the need on that twenty-

fifth day would be 0 per cent. In other words, each day the need decreases 4 per cent. I imagine that this is not a constant decreasing need, for on the second day the need still might be 100 per cent in place of 96 per cent as we shall assume. Now, will you imagine a chart with 25 days on it with the need at 100 per cent for synthetic milk on the first day and decreasing at the rate of 4 per cent each day until there is no need on the twenty-fifth day.

Now, consider each of the fundamentals I referred to earlier, including care, feeding and management, good breeding and disease and parasite control, and give each a percentage as to the kind of a job you will do. For example, you might rate yourself at 100 per cent on feed and 80 per cent on disease and parasite control; but, on care, because of an old, drafty, poorly-ventilated hog house, you might have to give yourself a mighty low zero per cent.

Like a convoy, where the speed of the slowest ship determines the speed of the convoy, your rating insofar as using synthetic sows milk should be a zero rating.

Back to the chart again. With a zero rating it would mean that you should not consider synthetic sows milk until the twenty-fifth day when there is no longer a need for it.

If by fixing up the hog house you could give yourself a 75 per cent score on care, and if 75 per cent is your lowest score on each of the fundamentals, then perhaps when the need for synthetic milk is down to 75 per cent, it is time for you to consider its use and not before.


If the manufacturer, the salesman and the farmer all keep this chart in mind, and it is used within the limitations I have just outlined, then I personally believe there is a great place for synthetic sows milk for both the average farmer and the so-called specialist.

LEFT: T. B. Halpin, Preservalline Mfg. Co., Flemington, N. J.; Morris Lapin, partner, M. Lapin & Sons, Philadelphia; Irving Rabinowitz, treasurer, Girard Packing Co., Philadelphia; Joseph Belack, vice president, Friedman and Belack, Inc., Philadelphia, and Edward P. Vail, John E. Smith's Sons Co., Buffalo, N. Y.

RIGHT: George Nelke, sales, R. W. Tohtz & Co., St. Louis; H. A. Christ, purchasing agent, Hunter Packing Co., East St. Louis; Hamilton Moran, research and product development, Milprint, Inc., Milwaukee, Wis.; David Saylor, president, Luer Bros. Packing Co., Alton, Ill., and A. D. Dickson, sales manager, Allied Manufacturing Co., Des Moines, Iowa.



Scientific & Operating



"Facts About Meat Color" by W. M. Urbain — "Improving the Quality of Dry Rendered Lard" by Alan J. Braun — "Improving the Quality of Tallows and Greases" by R. A. Duncan — "What's New in Research" by Panel of AMIF Scientists.

Oxygen is Key to the Color in Meat



URBAIN

IT IS UNNECESSARY to state how important the color of meat is in its sales and consumption. In these days of "Technicolor" the attractiveness of any food is significantly related to its color.

Meat is rapidly joining the long list of other food products in self-service counters where the persuasion of a salesman is absent and where the purchaser can examine the product at close range and critically. The impulse to buy, therefore, is stimulated by what is seen and in this process color is vital.

In the desire to gain more eye appeal and to provide greater convenience for the consumer the packer is adding to his problems. Exposure of more surface through slicing makes color more noticeable and, at the same time, increases the opportunity for deterioration. Slab bacon never had a color problem; sliced bacon has a serious one.

It is little wonder, therefore, that interest on the part of packers in color is increasing. While the color of meat is not a simple subject, many facts are known and to review them and to interpret them in light of the problems at hand is my purpose this morning. In this review only the color of the lean will be discussed.

The color of meat is due to the presence of certain pigments or substances having color. We shall limit this to the principal ones, the red pigments.

These pigments have a function in the living animal and their properties as color bodies in the tissue we know as meat are closely related to this physiological function. One pigment, hemoglobin, is the red substance of arterial blood and as the blood moves through the body, it carries the oxygen needed for life from the lungs to all parts. This pigment is in meat only as blood is incompletely removed from the carcass.

A second pigment, myoglobin, is a part of the muscle tissue itself. In the living animal, it serves to receive the oxygen from the blood pigment hemoglobin and to store

oxygen and make it available for the life processes of the muscle.

These two pigments are chemically very similar and for the purposes of this discussion we can treat the hemoglobin of the blood and the myoglobin of the muscle tissue as the same. For convenience, we shall refer to myoglobin only in speaking of the color of meat.

We all know from observation that the blood in any artery, that is the blood which has received a fresh supply of oxygen in the lungs, is red. We know, too, that venous blood—blood on its way to the lungs to get a fresh supply of oxygen—is bluish or purple.

COLOR CHANGE: These observations, confirmed by closer study, reveal that the addition of oxygen to hemoglobin changes its color from purple to red. Now normally we view meat in the presence of air. Hence, the normal color of meat is red. I am sure, however, that we all have noticed the darker color of a steak just cut off, say from a round, and the brightening which follows rapidly as the cut surface is exposed to air. The explanation is simple.

Inside a piece of meat as large as a round—the oxygen present while the animal lived is rapidly consumed and without blood circulation to provide new oxygen, this anaerobic oxygen-deficient condition prevails. The interior of a piece of fresh meat, therefore, is purplish. The surface, however, has access to air and the oxygen-myoglobin combination is present. In contrast to the interior, therefore, the surface, the only part we can normally see, is red.

At this point mention should be made, perhaps in a parenthetical fashion, of dark cutting beef. This is a comparatively rare condition in which beef does not brighten on exposure to air. This condition seems to be due to the inability of the purple compound to react with oxygen and take on the normal red color. It is believed to be the result of a condition of the animal prior to slaughter caused by a disturbance of the sugar metabolism. There is no known practical way to correct this condition in meat.

Because the consumer has learned through experience, that the normal color of fresh meat is red, he expects fresh meat to have a bright red color. We, who sell meat, therefore, have a standard set up for us. We must

avoid any departure from the expected bright red color if we are to attract and please our customers. This requires that we adhere to certain procedures and that we avoid others.

OXYGEN NECESSARY: In reviewing these, let us start by emphasizing that the red color of fresh meat is dependent upon the presence of oxygen. Our first requisite is, therefore, to assure the presence of oxygen. Normally this is easy to do, since fresh meat is usually handled in the presence of air. Today, however, we are seeing the growing tendency for pre-packaging and the wrapping of meats. Some wrappers do not allow the passage of oxygen.

If we are wrapping fresh meats, we must choose one that does, or else our colors will darken. Vacuum packaging, concerning which we shall have more to say later, does not apply to fresh meats at all.

Even though we have oxygen present, the color of fresh meat might not be bright red. We all know that right from the start some meat is darker than others. We see species differences. Pork is so light that its normal color is more properly called pink. Veal is very light. The color of prime beef is usually bright red. Even within species there is a variation, sex condition and age being prime factors. Bull meat, for example, is darker than steer.

These variations appear to be due to concentration differences. There is more of the pigment present in the darker colored meats. Such concentration differences seem to be related to the history and activity of the animal. The younger and less active animals produce lighter colored meat. Undoubtedly, this is the underlying explanation for a bright red color, especially in beef. It is indicative of a younger animal and consequently better quality meat.

Apart from what might be termed naturally inherent differences in color, fresh meats are not always bright red for other reasons. Discolorations arise, some of which impose serious limitations on the marketing of fresh meat. Let us examine several causes for discoloration.

The most usual kind of discoloration encountered in

1. Curtis G. Pieper, vice president, Oswald and Hess Co., Pittsburgh; C. K. Elliott, order buyer, C. K. Elliott Co., Mt. Victory, Ohio; J. W. Doran, Lynchburg Livestock Co., Lynchburg, Ohio, and Carl H. Pieper, president, Oswald and Hess Co., Pittsburgh.

2. J. E. Groneck, provisions manager; L. H. Crook, assistant provisions manager; J. F. Krey, president, all of Krey Packing Co., St. Louis; and F. A. Hunter, jr., president, Hunter Packing Co., East St. Louis.

3. Chas. Renard, Kennett-Murray & Company, Indianapolis; W. F. Schludberg, president, Wm. Schludberg-T. J. Kurlle Co., Baltimore; R. J. "Bob" Colina, Cincinnati, and T. L. Murray, both of Kennett-Murray & Company, Nashville.

4. William Lexier, superintendent, Braun Bros. Packing Co., Troy, Ohio; J. B. Harrison, sales manager; A. P. Carpenter, general manager, and Ed Harrison, plant superintendent, all of C. A. Durr Packing Co., Utica, N. Y.

5. S. A. Granche, Allen Gauge & Tool Co., Pittsburgh; Robert Tartow, Standard Casing Co.; Joseph Delayo, president, Angus Packing Corporation, and I. R. Brenner, Foremost Casing Co., all from New York City.

6. John Willett, Leo Bird, assistant general sales manager, and Ray Winstead, all of Oscar Mayer & Co., Chicago, and Mike Pulliam, buyer, E. W. Kneip, Chicago.





fresh meats is a brown one. Sometimes, however, due to the low pigment concentration of some meats, for example, pork, this browning takes on the appearance of a greying. While many causes can exist for such brown discolorations, the basic process seems to be the same in all cases, and in attempting to explain it, we seem to run into a contradiction.

BROWNING: For the oxygen which gives fresh meat its bright red color is the cause of the brown discoloration. By a process the chemist calls oxidation, myoglobin is converted to a brown substance. We shall call this substance met-myoglobin.

The explanation for this apparent contradictory action of oxygen—in one case to redden the pigment and in the other case to brown it—is simple. When oxygen acts to redden the pigment, to produce what is called oxy-myoglobin, that is one of two possible reactions. Another possibility is for the oxygen to react in another way, specifically to attack the iron present in the pigment. This change in the iron makes a new compound, not oxy-myoglobin but met-myoglobin, which is brown.

As the pigment of meat is exposed to air, the attack on the iron proceeds slowly. Ultimately, sufficient met-my-

DIAMONDS IN THE ROUGH. Youngsters enjoy convention hubbub with their parents.

TOP: W. H. Carson, Pitts Packing Co., Detroit, and Mrs. Carson pause for a photo with their young sons Ronnie and Tommy.

CENTER: From bottom to top it's Jeff Weissman, Mrs. Weissman, Sandra and papa Dave of Drying Systems, Inc., Chicago.

BELOW: Four-year old Bonnie Shaw holds on tight to her mother and Dad, Howard B. Shaw, manager, advertising and sales promotion, Hayssen Manufacturing Co., Sheboygan, Wis.

globin is formed to be noticeable and a discoloration is apparent. The best control in this reaction is temperature. Lower temperatures will hold it back.

It is possible that we are dealing here not only with a strictly chemical reaction, but also with one involving bacteria, but since bacteria are ordinarily present and since their activity also is controlled by lower temperatures, it is difficult to separate the chemical and bacterial processes. There is no doubt, however, that lower temperatures slow down the development of a brown surface color on fresh meats.

In addition to the slow browning of fresh meats, we recognize other processes whereby brown discolorations occur. The addition of salt to fresh meat, for example, can cause browning. Freezing, especially of bones, produces brown discolorations. Certain spices react to produce off-colored meats, frequently in a dramatic way. Extractives from wrapping paper can be the causes of discoloration. Ultraviolet light from the various kinds of germicidal lamps used in meat coolers can produce browning.

While one must recognize that various agents, such as listed above, are of considerable significance in the handling of fresh meats, as long as one works within the limitations imposed by them, the color of fresh meat is quite durable. The movement of fresh meats through the distribution channels that have been used for some time



presents relatively few problems. This is in quite sharp contrast with the difficulties encountered with cured meats.

Cured meats, as is well known, have pigments which are modifications of the natural pigments of meat. The basic purpose for modifying the natural pigment is to obtain a red color which is not significantly altered by heating. Whereas, fresh meats turn brown or grey on cooking, cured meats remain red.

WHAT HAPPENS IN CURING: Custom dictates which meats are cured and, of course, alteration of color characteristics is not the only reason for curing. The specific curing agent responsible for the pigment modification is the nitrite, which either is added as such, or is derived from sodium nitrate. The chemical reaction, whereby the modification is accomplished by the nitrite, is well understood.

Nitric oxide is formed from the nitrite. This is a gaseous compound composed of nitrogen and oxygen. It reacts with myoglobin such as does oxygen, forming a red compound, nitric oxide myoglobin comparable with oxy-myoglobin. Upon heating, however, the cured pigment stays red, being converted into another red pigment called nitric oxide hemochromogen. This is in contrast to oxy-myoglobin, which is converted by heat into a brown compound, myatin.

While red color stability to heat is the primary result of curing on color, the difference in the pigments cause other differences in the behavior of cured-meat color compared with that of fresh meats. Again we are dealing with oxidation, at least in most cases. But there is a basic difference. Oxygen is needed to maintain the bright red color of fresh meat.

In the case of cured meat the bright red color is not dependent upon oxygen, since it originates with the nitric oxide from the cure. Hence, we are not subject to the requirement for having oxygen present. Good cured color is possible in the absence of oxygen.

It will be recalled that we said that oxygen, or oxidative materials, could act on the pigment of fresh meat to produce a brown pigment called met-myoglobin. This same reaction can occur with nitric oxide myoglobin, and the same brown pigment is formed. In the case of cured meats, however, we have an advantage; we can get away from oxygen, for we do not need it as in the case of fresh meats for color maintenance.

OXYGEN-FREE STABILITY: Vacuum packaging, therefore, is a "natural" for cured meats, whereas it is contra-indicated for fresh. In fact, throughout the entire curing process it is essential to obtain conditions in which

LEFT: In front row are R. L. McTavish, John A. Dupps, president, and E. H. McClain. In back are F. B. Schottelkotte and C. H. Smith. All are associated with The Dupps Company, Germantown, Ohio.

CENTER: H. E. Reed, director of the livestock branch, Production and Marketing Administration, USDA; E. J. Cronkrite of the livestock branch, and George Lewis, vice president, American Meat Institute.

RIGHT: Seated are Carl J. Zeitler and Mrs. Zeitler, Sieloff Packing Co., St. Louis, and John Cole, pilot, Krey Packing Co., St. Louis. Standing: C. H. Dickson, manager, livestock service department, Krey Packing Co.; Carl J. Zeitler, jr., Sieloff Packing Co., and E. J. Koncel, personnel director, Krey Packing Co.

oxygen is absent in order to obtain a cured color at all. If cured meats can be kept free of oxygen, the color will be stable indefinitely.

Strangely, however, in the presence of oxygen cured meats are more susceptible to browning than fresh. This stems from the fact that there are two, rather than one, driving forces for causing the chemical oxidation reaction to proceed. In addition to the reaction involving the myoglobin, the nitric oxide also is capable of oxidation and this has the effect of increasing the ability of oxygen to cause browning.

That such an effect exists, is most clearly brought out in the reaction of light on cured meats. While ordinary light has little effect on fresh meats, it has a profound effect on cured. In a very short time, almost in minutes, light will "fade" cured meat color—if oxygen is present. The faded color is brown or gray and if the cured meat was uncooked and the cured pigment nitric oxide myoglobin, then the brown color is met-myoglobin. Apparently light speeds up the reaction, catalyzes it, as the chemist says.

This is a most serious situation for cured meats. In the sale of cured meats, especially the sliced ones, as ready-to-serve meats, fading is so rapid as to make it impossible to display them. Only essentially opaque wrapping materials afford protection against the unsightliness of fading. There is, of course, one obvious solution: Exclude oxygen. When oxygen is kept away, no oxidation can occur and light is without effect. I have held solutions of nitric oxide hemoglobin sealed in air tight glass tubes for years without visible change, even when such tubes were exposed to bright sunlight. Vacuum packaging, or any procedure which keeps oxygen away, is therefore indicated for cured meats.

With cured meats just as well as with fresh there are, of course, other conditions beside simple air oxidation

which give rise to discolorations. Some are related to the cure itself. Undercure, due to failure of the cure to reach a portion of a piece of meat, is not seen very often today, but was common when nitrate was used alone. Browning due to excess nitrite can occur and is usually recognized because of a characteristic odor. Under certain conditions, excess acidity in the cure will cause browning.

Perhaps the most interesting discolorations on cured meats are those which are green. There are two known basic causes for such discolorations; bacteria and metal contamination. Such green discolorations appear in a variety of products: ham, dried beef, franks, bologna, etc. It has been found that bacteria producing hydrogen peroxide, or hydrogen sulfide, can cause green discolorations. The remedy for such conditions is one of prevention—good sanitation starting with the uncured meats.

Of the metal contaminations, copper is the most active acid. Therefore, it is a good rule to keep copper out of all curing operations, brass, for example, being undesirable as an equipment metal. Some other types of green discolorations exist, the cause of which is not clearly understood.

OTHER COLOR CONDITIONS: There are three other color conditions in meats which bear mentioning. All are common to fresh and cured meats. One is the change of color due to surface dehydration. This change concentrates the pigment and causes darkening.

The exact effect varies with the product, but is easily recognized and usually related to lack of freshness. The second color condition is one properly called iridescence. This phenomenon usually produces a multi-hued discoloration. It has a physical rather than chemical basis. It is similar to the colors produced when oil is spread in a thin film on water, and in completely fat-free meat does not occur.

Apparently, when certain physical conditions involving the structure of the meat are secured, a fat film will produce iridescence. I have seen it frequently on sliced boiled ham and in roast beef. There is no known remedy and it is usually ignored.

The third color condition is one we packers can influence, but only at a distance. The lighting under which meats are displayed has a profound effect on their color. The red color we see is reflected light; therefore, the

source of light must contain red light. Ordinary daylight is a blend of all colors.

Artificial light as we know is not a perfect duplication of daylight, since colors look different under artificial light. These differences are due to the relative strengths of the different hues comprising the mixture that we call white light. When we are illuminating meat, we want to bring out the redness of it. Therefore, we should be sure to use light rich in red.

The relatively red tungsten filament lights are good. Some of the fluorescent lights, especially those with a bluish cast, are poor. They tend to deaden the meat colors, making some of them almost black. On the other hand, certain fluorescent lights having a reddish tinge are good. The important point is to choose lights with red in them regardless of type.

If one were to sum up the most important points on meat color it could be done this way:

For fresh meats keep oxygen available. For cured meats, keep oxygen away.

These two principles properly applied are the best basis for the best red color of meat.

Making a Better Dry Rendered Lard



BRAUN

THE DRY RENDERING method of making lard is recognized by most operators as being the best system for plants where the production is not too large in volume. It guarantees a complete recovery of all the val-

able constituents in raw fat without the need for the more expensive equipment used in the wet rendering process. It enables a packer to render fats that cannot be handled readily in a kettle rendered system.

As most operators of dry rendering systems have discovered, however, this type of rendering plant offers one major operating problem. It is not easy to produce a uniformly light-colored and mild-flavored dry rendered lard. Until more or less recently, it was not too difficult to market dry rendered lard that was slightly dark in color and somewhat high flavored. This situation has changed.

Dry rendered lard now has to compete not only with bland, deodorized, neutral-flavored lards, but also with lards processed for specific purposes such as cake making. The net result has been that the small producer is facing the necessity of perfecting his dry rendering methods so that each batch of lard will be as light in color and bland in flavor as is possible. It is to this operating problem that I wish to direct primary attention today.

The equipment used for dry rendering lard is known as a dry melter. It consists usually of an insulated horizontal steam-jacketed cooking tank with charging door, vent line, vacuum line, discharging door and sampling device. It is also equipped with a mechanical arm agitator extending the length of the tank to stir the material while it is being cooked; this keeps the surface of the shell clean to insure good heat transmission from the



A. E. LARKIN, manager, packing division, Geo. A. Hormel & Co., Austin, Minn.; David Weissman, sales engineer, Drying Systems, Inc., Chicago; Heilman Allen, manager at Dallas, Tex., and K. H. Dean, dry sausage department, both of Geo. A. Hormel & Co.; F. A. Twedell, assistant general manager, Houston Packing Company, Houston, and O. L. Marquesen, manager, Mitchell plant of Hormel, Mitchell, S. D.



1. Mrs. Sotola and Jerry Sotola, associate director, Armour livestock bureau, Chicago.
2. Vinnell Dish and C. W. Hess, president, Speco Inc., Schiller Park, Ill.
3. Bernell Gardner, executive vice president, Herman Sausage Co., Tampa, Fla., and guest.
4. Miss L. A. Wehrheim, Quartermaster Food and Container Institute, Chicago, and Col. Rohland Isker, executive secretary, R. & D. Associates, Chicago.

steam in the jacket to the contents of the tank and aids in preventing scorching of the lard.

There are several methods of dry rendering lard. Let us consider these methods briefly:

1. *Cook under pressure; dry under vacuum.* The purpose of the pressure period is to disintegrate the fat. Twenty minutes at 20 lbs. pressure is sufficient. As soon as the melter is loaded, steam should be turned on the jacket and the contents of the melter heated until moisture in the fat begins to pass off in the form of steam and all the air in the melter is displaced. The vapor outlet is then closed and the pressure develops in the melter from moisture being freed from the fat in the form of steam.

At the proper time, the vacuum line is opened, and drying under vacuum continues until the charge is cooked.

2. *Cook under pressure; dry with vent open.* In this procedure, the vapor is discharged to the atmosphere without being condensed. Higher drying temperatures are used than when finishing is accomplished under vacuum.

3. *Cook with vent open; dry under vacuum.* In this method, most of the moisture is discharged to the atmosphere before the drying under vacuum is initiated. This method is practical only if hashed fat is being rendered.

4. *Cook and dry with vent open.* This method is most practical if hashed fat is being rendered.

5. *Cook and dry under vacuum.* This method is also most practical when hashed fat is being rendered.

Each of these operating procedures has its adherents. Methods 1 and 2 are customarily used for unhashed fats. Methods 3 and 4 are customarily used for hashed fats.

Regardless of the exact operating procedure followed, the determining factor in the production of good, salable lard by the dry rendering system lies in the finishing temperature during drying. There is little danger of burning the lard and giving it a high flavor while considerable moisture still is present in the fat. The critical point is at the end of the cook when most of the moisture has been boiled off. At this point, the temperature of the lard should not exceed 240° F. and should be maintained at that point for only a few minutes. A higher temperature or longer finishing cook at this temperature may be expected to result in darkening or strong flavors. This

points to the need for provision of some definite method of temperature determination to aid the operator in maintaining close control over this stage of the rendering operation.

The accuracy of this statement is supported strongly by information developed by the Institute and the Foundation in a survey of lards made by some of these methods or by slight variations in them. Typical examples are shown as follows:

Table 1
Dry Rendering Lard

Plant	Vapor Temperature End of Cook	Color		F.F.A.	Moisture
		Yellow	Red		
A	240° F.	8	1-1.5	0.1-0.4	0.02
	?	20	4.2	0.3	0.02
B	230-240° F.	6	1	0.25	0.02
		6	1	0.21	0.20
C	220° F.	12	2	0.28	0.06
D	240-250° F.	Kill 36 Cut 36	3.2 3.2	0.28 0.28	0.06 0.04

In plant A, where the cooking and drying was accomplished with the vent open and the exhaust steam removed by condensers, variable results were obtained. When a cook was dumped at 240° F. the Lovibond color values were only 8 yellow and 1-1.5 red with a free fatty acid value of 0.1-0.14 and a moisture of 0.02. However, in the same plant a cook was dumped at an unknown temperature. The color values were 20 yellow and 4.2 red and with a free fatty acid of 0.3, indicating a high finishing temperature.

In plant B, where unhashed fat was cooked and dried with the vent open at all times, the lard was taken off at 230-240° F. Very favorable color values of 6 yellow and 1 red with a free fatty acid of 0.25 and a moisture of 0.02 were obtained.

In plant C, the rendering was accomplished under 12-15 lbs. steam pressure and drying was accomplished with the charging hatch open. The lard had fair color with 12 yellow and 2 red and the free fatty acid was 0.28.

In plant D, where both cooking and drying were accomplished under vacuum, the temperature of the finished lard was 250° F. This was reflected in the high color values of the dark lard which were 36 yellow and 3.2 red.

Conclusions have been reached that very acceptable lard can be made by any of the customary methods of dry rendering provided—and this reservation is important—sufficient care is taken at the end of the cook when the contents of the melter are almost free of moisture to avoid exposing the lard to high temperatures for any prolonged period. It seems apparent, however, that the matter of temperature determination and control in the dry rendering method needs to be given much more

serious consideration than many operators have accorded it in the past.

Information assembled by the Institute indicates that many packers recognize this problem but either have been unsuccessful in developing effective operating and control procedures or have not provided the close supervision necessary to make certain that the lard is not down-graded by operating errors at the very end of the run.

As an illustration of what can be accomplished through the establishment of effective operating controls, our own experience is pertinent. In some cooperative work we carried out with the Institute and the Foundation in an effort to improve our lard, the following procedure was followed:

After the cooker was charged, the vent line was opened, the cooker was started and a steam pressure of 20 lbs. was placed in the jacket. When steam began to pass from the vent line, this line was closed and an internal pressure of 20 lbs. was allowed to build up and hold for 20 minutes. At the end of this time, the vent line was opened very slowly to allow the internal pressure to dissipate. The vacuum pump was then started and the vent line again closed. An internal vacuum of 15 in. was maintained throughout the drying period. We took samples every 15 minutes during the drying period in order to determine at just what point our lard began to darken and to determine how we could control our steam pressures at that point to minimize the darkening effect and still dry the lard sufficiently.

The following are the results of the first test:

Table 2

Raw Material	1 10:30	2 10:45	Sample Number 3 11:00	4 11:15	5 11:30
Batch 1					
Cutting fat					
Yellow	14.0	14.0	14.0	20.0	20.0
Red	2.3	2.8	3.0	3.0	3.5
Batch 2					
Killing fat					
Yellow	6.0	8.0	8.0	8.0	8.0
Red	1.0	1.2	1.2	2.0	2.2

Steam Pressure—20 lbs.
Vacuum—15 in.

In Batch 1, cutting fats only were used. The first sample had a 14.0 yellow and a 2.3 red. The second sample a 14.0 yellow and a 2.8 red. The third sample a 14.0 yellow and a 3.0 red. The fourth sample a 20.0 yellow and a 3.0 red. The fifth sample a 20.0 yellow and a 3.5 red.

In Batch 2, killing fats only were used. The first sample had a 6.0 yellow and a 1.0 red. The second sample a 8.0 yellow and a 1.2 red. The third sample a 8.0 yellow and a 1.2 red. The fourth sample a 8.0 yellow and a 2.0 red. The fifth sample a 8.0 yellow and a 2.2 red. The same rendering procedure was followed for both batches.

Steam to the jacket was turned off 15 minutes before the lard was finished after Sample 4 was taken in both instances. The lard from the cutting fat, when bleached, was 20.0 yellow and 3.0 red. This indicates poor bleachability. The lard from the killing fat bleached out to 7.0 yellow and 1.2 red. This was a very acceptable product. Just why the cutting lard was consistently poorer than the killing lard was not determined. We do know that an excessive amount of skin was left on some of the pieces of fat moving from the cutting floor and the higher color may have been due to the skins in the charge. Both

of these runs were better than we had previously been making when the color of the lard was much darker. Since these tests, we have attempted to eliminate all skins from our fat. Previously we had operated at 60 lbs. jacket pressure. It took only 15 minutes longer to render at 20 lbs. pressure.

Subsequent to running Test No. 1, Dr. Kraybill and Dr. Dugan visited our plant, and while they were there we ran Test No. 2. The same rendering procedure was followed as in Test No. 1 with the exception that the jacket pressure was reduced to 10 lbs. during the drying operation.

The following results were obtained from Test No. 2:

Table 3

Color	Samples Taken at 15-Minute Intervals during Cooking and Drying Period					Steam Pressure
	1	2	3	4	5	
Yellow	7.7	8.2	8.4	8.7	8.9	10 lbs.
Red	1.2	1.4	1.4	1.4	1.3	

The first sample had a 7.7 yellow and 1.2 red. The second sample a 8.2 yellow and a 1.4 red. The third sample a 8.4 yellow and a 1.4 red. The fourth sample a 8.7 yellow and a 1.4 red. The fifth sample a 8.9 yellow and a 1.3 red.

The reduction of the jacket pressure to 10 lbs. during the drying operation caused a decided improvement in the color of the lard from this run. It demonstrates very conclusively the need for preventing temperatures above 240° F. toward the end of the cook since a steam pressure of 10 lbs. gauge is equivalent to 240° F., and in this instance there was no appreciable darkening of the lard.

A subsequent test was performed in an effort to repeat our original findings. In both cases the temperature of the lard was determined by allowing some of the free run lard to run into a flask. A hand thermometer was then used to determine the temperature. This was done immediately after the rendering was over, so as to determine the temperature as accurately as possible under the conditions.

Table 4

Sample No.	Steam Pressure in Jacket	Temp. of Lard	Moisture	F.F.A.	Color Yellow	Red
1A	20 lb. throughout cook	250° F.	0.18	0.20	6.0	1.4
2A			0.11	0.20	7.0	1.0
3A			0.06	0.20	8.0	1.2
4A			0.05	0.20	10.0	1.3
1B	20 lb. to cook and 10 lb. to dry	210° F.	0.14	0.15	6.0	1.2
2B			0.13	0.15	7.0	1.2
3B			0.09	0.15	8.0	1.3
4B			0.14	0.15	10.0	1.3

The "A" samples were prepared as follows: The lard was cooked under a jacket pressure of 20 lbs. for the entire cooking time. Samples were taken every 15 minutes from the time the cooker was placed under the vacuum until finished. The temperature of the finished lard was 250° F. The free fatty acid was 0.20. The moisture ranged from 0.18 at the beginning of the drying period to 0.05 at the finish. The color ranged from a 6.0 yellow and 1.4 red at the beginning to 10.0 yellow and a 1.3 red at the finish. Total cooking time was two hours and 25 minutes.

The "B" samples were prepared as follows: The lard was cooked under a jacket pressure of 20 lbs. for 20 minutes. At the end of this period, a vacuum was placed on the cook and the jacket pressure was reduced to 10 lbs. for the remainder of the cooking time. Samples were



T. A. Patterson and H. J. Zenke, both of St. Regis Paper Company, Chicago.



Wm. A. Walberer, manager of special commodities division, and W. H. "Hank" Bright, Fearn Foods Inc., Franklin Park, Ill.



Dan Koss, secretary treasurer, and Bob Tartow, Standard Casing Co., New York.



Dr. Julius Schuelein, Vegex Company, New York City, and Fred G. Leydorf, Cudahy Packing Co., Toledo.

taken every 15 minutes from the time the cooker was placed under vacuum until finished.

The temperature of the finished lard was 210° F. The free fatty acid was 0.15. The moisture ranged from 0.14 at the beginning of the drying period to 0.04 at the finish. The color ranged from a 6.0 yellow and 1.2 red at the beginning to a 10.0 yellow and a 1.3 red at the finish. Total cooking time was two hours and 15 minutes. For both samples a vacuum of 15 in. was maintained during the drying period.

You will note how these rendering procedures compared in relation to the quality of the lard. The free fatty acid values are constant throughout each process, although they are different for each lot. The moisture values show generally decreasing values with cooking time although these values are not especially meaningful since these samples contained residues withdrawn with the lard through the sampling tube. The color values are as nearly identical as could be expected from two successive runs.

These values indicate as clearly as any other criteria the value of careful end point control. In a process where a vacuum is applied, the end point may be reached rapidly and the temperature of the lard may rise quite rapidly after suitable reduction of moisture content. In the first instance where a careful supervision was in force at the end of the run, the lard was dumped at a temperature of 250° F. which would normally be expected to have a darkening effect.

However, since the operator was very alert to take

samples and watch the progress of the cook, it was possible to dump the lard without any appreciable darkening even though the temperature had begun to exceed 240° F. In the second run where the jacket steam pressure would not permit a temperature in excess of 240° F., the same color values were obtained but the precise control of the end-point was not nearly so critical.

Now let us turn our attention specifically to the question of temperature control. When steam rendering is used the question of temperature is not important. The lard cannot be burned any more than a stew can be burned unless the kettle runs dry. In the case of kettle rendering, it is comparatively easy to take the temperature merely by submerging a thermometer in the lard in the open kettle. When the proper temperature is reached, the contents of the kettle are dropped immediately and quickly into the strainer box below the kettle.

Temperature control in connection with dry rendering is more difficult. Here, the operator is working in the dark unless and until some method is devised for taking accurate temperatures of the contents of the melter. Everything is under cover. The operator cannot see what is going on. His roast may burn before he opens the cover.

Various methods have been used to determine the temperature such as locating a thermometer in the vapor outlet and in the material itself. Both of these methods leave much to be desired.

Table 5
Relations between Temperatures of Vapors in the Vent and Temperature of the Lard at Time of Dumping the Charge

Run	Temperature of Lard	Temperature Vapors in Vent
1	240° F.	225° F.
2	240	225
3	242	225
4	245	225
5	251	230
6	243	220

Thermometers located in the vapor outlet will indicate temperatures varying from the actual temperature of the cooking product. The amount of variation will depend upon the rate of flow past the thermometer as the result of the restrictions due to the size and length of the vapor line and the number of fittings in the line. Superheating of vapor in contact with the shell above cooking materials as they become dry may also affect this temperature.

Thermometers actually located in the cooking material may show inaccurate temperatures if uncooked product becomes lodged on the bulb of the thermometer.

A completely satisfactory answer to this problem is not yet available. It may be that, ultimately, the solution will be found in tapes placed in the bottom of the melter.

The only practical answer to the problem at this time is to compare the temperature contents of the melter when discharged to the draining tank with the concurrent temperature recorded by the thermometer in the vapor line or by whatever indicator is being used. This comparative check should be repeated as often as may be necessary to determine with reasonable certainty the amount of variation between the actual and the indicated temperature.

Actual operating procedures then can be adjusted on the basis of this differential. It is most important that the relation between vent temperatures and actual lard temperatures be determined if we are to get satisfactory performance out of our dry rendering equipment and are to

produce the best quality of lard that can be made by this method.

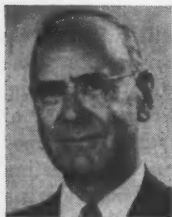
In conclusion, I want to emphasize that temperature control in dry rendering is an absolute must for best quality lard. It is extremely important that the temperature of the lard at no time exceeds 240° F. As an operational caution, it should be noted that, even though the temperature of the lard may show that 240° F. has been reached, the cracklings may not yet be dry enough to press satisfactorily.

It is at this point that the skill and training of a good lard operator come into play. The steam pressure in the jacket must be reduced to prevent a temperature rise above 240° F., and the cook must be sampled frequently enough to permit the operator to judge when the typical sandy graininess characteristic of a properly cooked crackling has developed.

There is much evidence that good lard can be made by dry rendering methods. It is apparent, however, that the operator must be acquainted with the best practices for making good lard. He must use fresh fats, operate carefully, give strict attention to temperature control and make sure that the temperature of the lard does not exceed 240° F., especially in the drying period.

It is our belief that all producers of dry rendered lard should subject their process to a careful scrutiny with the view of improving their product. This should yield multifold dividends. Among these dividends should be a better competitive position for their product and, most important, a generally improved acceptance of lard for shortening purposes.

Improving Quality of Inedible Fats



DUNCAN

BY WAYS AND MEANS of improving the quality of tallows and greases we mean, of course, improving the *general quality level* of the fats produced. Strictly speaking, we cannot improve the quality of the tallows and greases for they are strictly in the top bracket as they exist in the carcass of a freshly slaughtered animal. They become poor fats only as they deteriorate or suffer damage in the process of recovery or storage so that our topic might be restated as "Ways and means to reduce the deterioration of tallows and greases."

The loss in quality means a reduction in the actual value of the fat and represents an economic loss that you, as producers, we, as consumers, and the general public must all share. Since margins are never wide enough to be comfortable, this means that the subject of our discussion is an important topic to all of us. To start out, we will briefly discuss the steps in the rendering operation in the order of processing, but emphasize only those items which affect fat quality.

HANDLING RAW MATERIALS: All raw materials should be rendered promptly. In some rendering plants, this may be impossible, but it should not be too difficult in a packing plant, and every possible effort should be

made to see that this rule is strictly followed. The offal from a slaughtered animal decomposes much faster than the meat in the cleaned carcass and the entrails contain fat splitting enzymes and other contaminants.

Similarly, any dead stock that may have fallen in your yards should be handled as soon as possible and, in the meantime, the carcasses should be held at as low a temperature as can be managed. The rate of deterioration speeds up as it proceeds, so slow handling means high fatty acids and poorer quality generally in the rendered fat.

There is also good evidence that when any raw material, but especially offal, is stored for several hours before processing, some of the tissues are broken down and that certain of the breakdown products are fat soluble. Among these fat soluble breakdown products are the phosphatides which have good emulsifying properties. They slow down the rate at which crackling fines will settle out of the fat and, if any moisture is present, there is a good chance that troublesome emulsions will result. We know only one way to correct this condition and that is to process the raw materials promptly.

After the damage is done and the phosphatides are dissolved in the fat, the best way we know to remove them is to treat the fat with a solution of trisodium phosphate. This is a corrective measure, however, and is not necessary when the raw materials and the process have been handled properly.

PREPARATION OF RAW MATERIALS: All the material going to the rendering kettle should be clean. This also includes the carcasses of any dead animals that fall in the yards and are rendered in your plants. Failure to clean the offal, and particularly the entrails, results in troubles such as were listed above, and in addition, the fat extracts unsaponifiable material and coloring matter from the manure to such a degree that it can seldom meet the requirements for either the Fancy or the Prime grades. Under most conditions of operation, this is poor economy.

Clean fresh offal should produce Fancy tallow, and the depreciation in value caused by failure to wash properly will generally quickly pay for the hashers and washers needed to do a good job.

COOKING: This operation not only releases the fat from the fatty tissue, but it changes the character of the protein so it will not "creep" or flow when put under pressure. It also stops fermentation and enzyme action which would otherwise cause rapid deterioration, and it reduces the moisture content from perhaps 40 to 60 per cent to a range of about 4 to 7 per cent to insure that the cracklings will grind and keep well. Under favorable conditions, this requires perhaps four hours, and while the raw color of the fat is generally darkened considerably, it is not necessarily a permanent damage.

Under unfavorable conditions, however, the tallow can be degraded from Fancy to Special or even lower. Some of the commoner of these unfavorable conditions are:

JACKET TEMPERATURES TOO HIGH: It is hard to justify setting any precise temperature or pressure for all conditions, but we all know that high temperatures cause more risk of burning cracklings, and of oxidizing and darkening the fat than low temperature. Our service men recommend that pressures should not exceed 60 lbs., and they prefer to see them held to about 45 lbs. Tallow damaged by burning is likely to show high RB colors, i.e.,

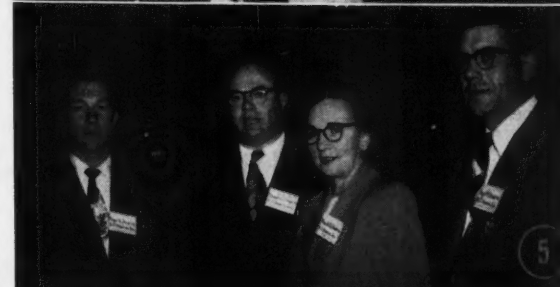
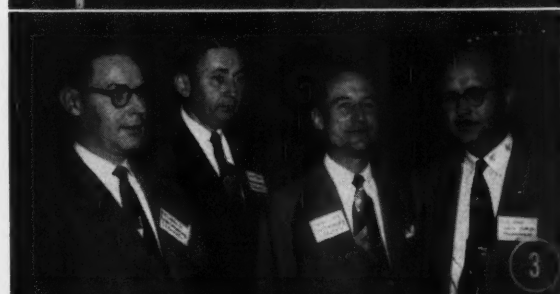
Refined and Bleached colors, even though the raw colors may not be particularly high. Air oxidation probably accounts for part of this damage.

TOO MUCH WATER IN COOK: Water added with the charge must be removed by cooking, and this is hard on the coal pile and hard on the owner's pocketbook. It is also bad on fat quality, especially the free fatty acid, because it drags out the cooking time. Perhaps the worst type of water trouble, however, is that resulting from a long uncovered vapor line, which permits the water boiled out of the cooker to condense and drain back. This means that the same water may be boiled out several times with bad results on turn-over, costs, and fat quality.

OVERCOOKING DUE TO POOR CONTROL: This practice has much the same result as cooking at too high temperatures for even the recommended range of jacket pressures will cause scorching and damage if the heating is not stopped at the proper time. The water evaporating from the charge keeps the crackling temperature down to a safe level in the beginning, but as the moisture content is lowered, the charge temperature rises rapidly, so it is important to stop at the right end-point.

OVERCOOKING WITH INTERNAL PRESSURE: When meat is shredded or finely ground before it goes to the cooker, it can be quickly and easily rendered at a temperature of 180°F. This is 127°F. below the temperature corresponding to the 60-lb. gauge pressure on the jacket, which we mentioned earlier. This makes it plain that higher temperatures are needed only because much of the material going into the cookers is in large chunks, and higher temperatures are necessary in order to cook the inside of these large pieces within a reasonable time. When extra large chunks of meat or unbroken bones are charged into the cooker, high jacket temperatures may not be enough and internal pressure may be necessary.

A combination of wet steam and high temperature can rather quickly cook and disintegrate the meat and even the bones and, if the operation is properly carried out, the results can be satisfactory. If the timing of the internal pressure cooking is not right, however, or if it is continued too long, or if the pressure is released too quickly, a part of the meat may be broken down to such



1. Ralph Daigneau, vice president, Geo. A. Hormel & Co., Austin, Minn.; J. W. Coverdale, manager, agricultural relations, The Rath Packing Co., Waterloo; U.S. Representative W. R. Poage, Waco, Texas, and Al. Davies, livestock department, American Meat Institute, Chicago.

2. Arthur Tooby, vice president, Russ Markets, Inc., Eureka, Calif.; Wick Stephens, American Meat Institute, San Francisco; W. S. Marks, Woodland, Calif., and Carroll Canoles, American Meat Institute, Chicago.

3. B. B. Lochte, jr., assistant plant superintendent; Curtis F. Davis, purchasing agent, and Charles L. Flora, industrial engineer, all of Wm. Schludberg-T. J. Kurdle Company, Baltimore, and H. E. Sparks, superintendent, John J. Felin Co., Philadelphia.

4. Robert Zehner, superintendent; F. W. Hager, chief engineer; Herbert Ullman, sausage foreman, and Harley Tibboles, all of Zehner Packing Co., Bellevue, Ohio.

5. Roger A. Stearns, manager; Bernard D. Stearns, treasurer; Mrs. Bernard D. Stearns, president, and Hugh M. Stearns, sales manager, all of B. D. Stearns, Inc., Portland, Maine.

6. Fred Wagner, sales manager, and J. V. Jamison, III, president, Hagerstown, Md.; Jack Fogle, sales engineer, and Stanley Badwin, district manager, Chicago, all of Jamison Cold Storage Door Co.



LEFT: C. E. Dippel, president of C. E. Dippel & Company, Inc., New York City, and Miss F. A. Stroh, advertising manager and purchasing agent for Excelsior Quick Frosted Products, New York.

BELOW: Dr. John T. Owen, technical advisor, Merck & Co., Rahway, N.J., and Dr. C. E. Gross, director of scientific research for John Morrell & Co., Ottumwa, Iowa.



LEFT BELOW: A. E. Minor, manager of purchases, and F. E. McCarthy, assistant sales manager, both of John Morrell & Co., Ottumwa, Iowa.

RIGHT BELOW: C. F. Selfridge, director, The Lima Packing Co., Lima, Ohio; L. G. Herman, bacteriologist, Wilson & Co., Inc., Chicago; and Roy D. McClain, sales manager, The Lima Packing Co.



a degree that it affects the tallow in the same way as slow handling of the offal. When this happens, the fines are difficult to settle out of the fat, filtration is difficult, and emulsions are easily formed.

SETTLING: After the fat is removed from the cracklings, it should be settled until it is clear and brilliant. Under favorable conditions, this can be accomplished by holding for a few hours in a settling tank. The fat should first be heated to 180°F. and then the heat should be shut off. Leaving the heat on for a longer period not only causes convection currents which interfere with proper settling, but, in addition, it may damage the color of the fat. The settling time required to clarify a tankful of oil necessarily depends on how tall the tank is, but under favorable conditions the fines will settle at the rate of perhaps 1 ft. per hour.

The clear settled fat should be pumped from the settling tank into storage through a multiple drawoff line so that only clear fat will be transferred. The settlings should be removed from the settling tank after each batch. When following such a plan, it will obviously be advantageous to use a cone bottom tank. This will make it easy to pump any settlings, together with the residual oil left with them, back to the cooker at the finish of a batch.

STORAGE: The tallow and grease sent to storage should be both clean and dry, and should be kept in that condition. Actually, however, "clean" and "dry" are both relative terms, and some finely divided settlings are almost sure to be present. Also, it is difficult to prevent a certain

amount of moisture being present, and the two make a bad combination. When this happens, and the mixture is allowed to stand, the settlings sour, liberating fat soluble products such as the phosphatides previously mentioned, which have emulsifying and fat splitting properties.

As a result, the tallow may increase rapidly in both free fatty acid content and color, and some shipments may be unaccountably high in both moisture and in insoluble impurities content. This is because the fat near the bottom of the tank comes in closer contact with the rotting protein material and suffers more damage.

If heating coils are kept on, enough circulation of oil will probably result to mix the fat in the tank so that it will all be partially damaged. To minimize such damage, it is obviously necessary to not only hold the amounts of water and fines going into the storage tank to the lowest practicable level, but also to clean the storage tanks at frequent intervals.

Tallow in storage should be held at as low a temperature as is practical. High temperature storage damages fat rapidly and adversely affects the free fatty acid, the color, and the RB color. When tallow is held in storage for a long time during winter weather, it may solidify completely. This is, of course, a favorable condition (*More DUNCAN on page 155*)

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ANNOUNCES

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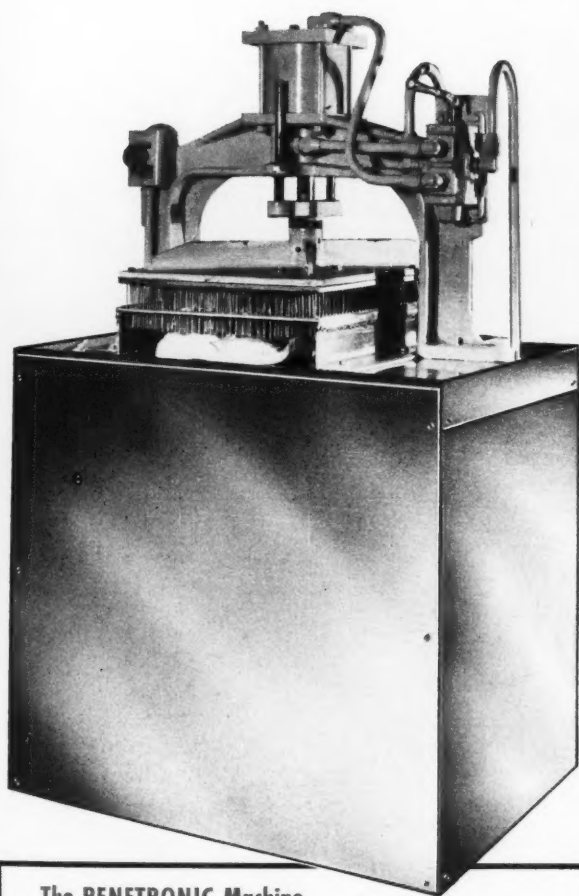
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The PENETRONIC Machine

in operation, as described below, at Chicago packing plant —after two years' research and development in Griffith's laboratories and experimental kitchen.

HOW AND WHY THE PENETRONIC PROCESS INTRODUCES A NEW ERA IN BACON CURING

The operator of the PENETRONIC Machine inserts a belly . . . presses the button . . . and down come 1600 stainless steel pins to penetrate the slab, just short of the skin! On the other side, a man removes and hands

the pierced belly to a second man who places it on a pallet. A third man sprinkles a measureful* of PENETRONIC Bacon Mix on the slab, and quickly spreads it over the entire surface.

One operator at the PENETRONIC Machine can keep three men busy, piling and curing. As the pile of "in cure" bellies advances, the machine is simply rolled back to open space, and the production pace continues: *7 slabs per minute . . . 420 an hour! 40,000 pounds* of bellies in a 7½-hour shift!*

So fast, deep and uniform is the curing action of PENETRONIC Bacon Mix—pierced bellies put "in cure" on Monday are ready to smoke on Thursday! *3 days later!*

Uniformity is an exceptional quality of PENETRONIC Bacon—uniformity in color, and deliciously mild flavor. Fast penetration curing results in uniform salt content, assuring long stability of the sweet-tasting bacon. And a maximum yield of *number one* slices! The firm fat doesn't smear the blade . . . and the lean is a long-fixed, bright, appetizing pink—throughout the belly!

With Griffith's PENETRONIC process you can deliver Monday's bellies as fresh-looking, fresh-tasting, packaged bacon to retailers on Saturday! And get your money back faster—at less cost to you.

*Production records confirm research, showing 8-oz. of PENETRONIC "Dry Cure" Bacon Mix produces ideal results in curing 12 to 14 lb. bellies. Other weights proportionate.

WATCH FOR EARLY ANNOUNCEMENT AND DETAILS ON "THERMOCURE"®—Griffith's Modern Method of Curing Bacon in Hours Instead of Days!

First

in *Griffith's*®

Family of Scientifically-Formulated Cures

PRAGUE POWDER®

The uniform curing compound of
microscopic crystals—in which all
ingredients are fused, in balanced
proportions, for safe, fast curing.

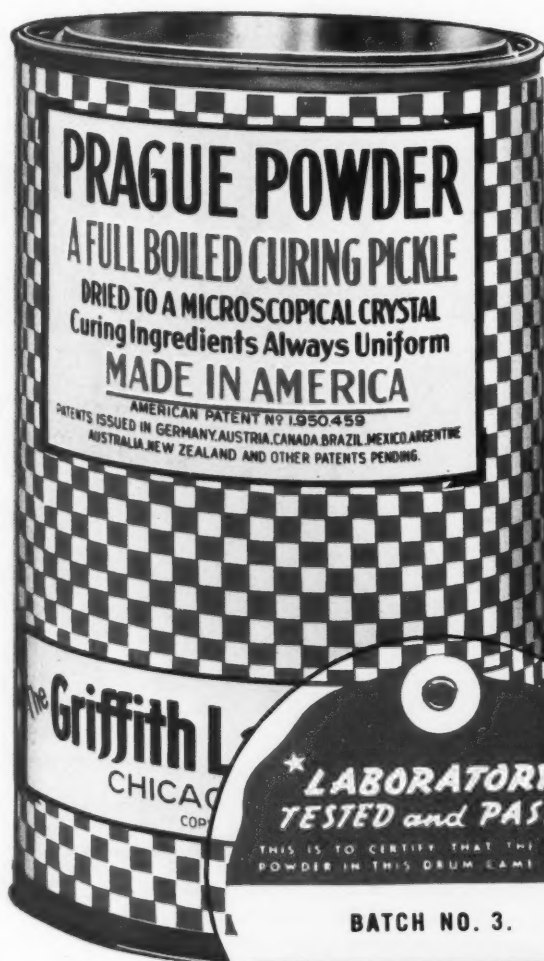
USE AS PUMPING PICKLE

USE AS CHOPPER CURE

THE *Griffith*
LABORATORIES, INC.

CHICAGO 9, 1415 W. 37th St. • NEWARK 5, 37 Empire St. • LOS ANGELES 58, 4900 Gifford Ave.

In Canada—The Griffith Laboratories, Ltd. • TORONTO 2, 115 George St.



PRAGUE POWDER—Made or
for use under U.S. Pat. Nos.
2054623, 2054624, 2054625
and 2054626

(DUNCAN from page 150)

from the standpoint of deterioration, but the remelting operation should be handled carefully to prevent overheating.

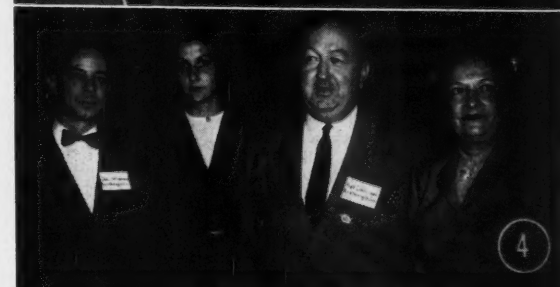
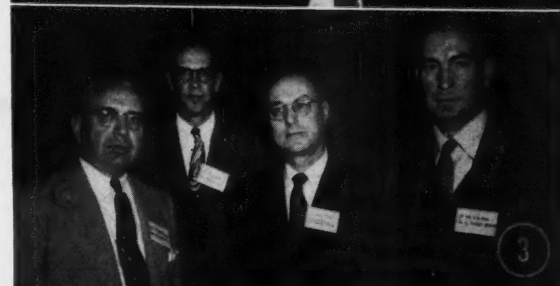
Exhaust or low pressure steam should be used and unless the steam pipe enters at the top of the tank, a loop of the coil should be carried to the top and then down again, so that the hot melted fat can rise and start circulation. Such an arrangement speeds up the melting time and greatly reduces danger of burning part of fat.

When tallow or grease is loaded from the storage tank into a tank truck or tank car, it should be drawn out through a line that is well above the level of any settleings or emulsion layer that may be in the tank. The best way we know to do this is by having at least three or four connections between the pump-out line and the tank, spaced about 4 in. apart when measured in a vertical direction. By withdrawing small samples from these outlets, it is easy to tell which one should be used in order to deliver clean and emulsion-free tallow. It is also easy to tell when, and how much, settleings are present.

CATCH-BASIN FATS: You have probably noted an omission in the above discussion of processing, and that is the handling and disposition of catch-basin, smokehouse, and all similar low grade fats. This omission was intentional, for such fats should not be worked up with, or blended into the fancy grade fats that you should be able to produce from packinghouse materials. To mix them all together may be convenient, but it will cost you money.

The best way we know to handle catch-basin fats is to wet render them. Since the non-fatty materials that will be skimmed off with the fats will mostly remain in the water layer, the fat produced is much better in color than when dry rendered. In addition, it is much easier to keep this lower grade fat separate from the good tallow than where the same cookers are used to render both.

While the above discussion covers sketchily the operating conditions affecting quality, we have not looked directly at the quality items of color, free fatty acid, and MIU and asked just what causes high readings. In the



1. Joseph Boehler, technical director; H. Lyle Greene, president; Adolph Gnoerk, sales engineer, and B. C. Lewis, sales manager, all of Peters Machinery Co., Chicago.

2. Marc Scheumann, general superintendent; Owe Toennies, maintenance superintendent; Henry Lurie, plant engineer, and Cletus Elsen, cost accountant, all of The E. Kahn's Sons Co., Cincinnati.

3. O. F. Matthews, manager, beef division, and L. E. Winnett, sales manager, both of John Morrell & Co., Sioux Falls, S. D.; with Paul C. Doss and Lt. Col. A. D. Hall, both of the Quartermaster Market Center, Chicago.

4. John L. Hillebrand, treasurer, and Mrs. Hillebrand with Fred Dykhuizen, president, all of Dixie Packing Co., Arabi, La., and Mrs. Kirby Longino, Longino & Collins, New Orleans.

5. Bill Reece, staff member, American Meat Institute, Chicago; Roy D. McClain, sales manager, Lima Packing Co., Lima, Ohio; W. M. Curtis, superintendent, and H. B. Huntington, president, both of Scioto Provision Co., Newark, Ohio.

6. Elias H. Poworoznyk, personnel manager, Essex Packers, Ltd., Hamilton, Ont.; Paul Wowk, assistant manager, Essex Packers, Ltd., Merritton, Ont.; Bill Boyd, salesman, Transparent Package Co., Toronto, and C. J. McKee, comptroller and secretary-treasurer, Essex Packers, Hamilton.



AMI office personnel were kept busy registering record number of conventioners.



Here's the massive sausage that stumped the experts. The correct weight was given out as 331 lbs. 4 oz.

Activity ran high at AMI's booths in the far corner of the exhibit hall where folks tried their luck, or skill, at guessing weight of giant Thuringer.

short time that is left, I want to give such answers as I can to these questions, even though at times it may mean a certain amount of repetition of the comments given above.

COLOR: Any color in tallow and grease is due to dissolved impurities. The commoner colors are various shades and combinations of yellow, red and green. There are two main sources:

- a. Coloring materials absorbed from other materials in the cooker, and
- b. Broken-down or oxidized fat due to overheating.

The colored materials normally absorbed from the cracklings during the cooking period will usually be largely removed by refining and bleaching, provided they have not been "set" by too high a temperature or other unfavorable conditions. On the other hand, tallows that are dark because of overheating, give a high RB color, and on saponification, they give a dark soap.

From the soapmaking standpoint, dark fats cost more to

process and the amount that can be utilized is limited.

FREE FATTY ACID: Free fatty acids are formed when a fat is split by undergoing a chemical reaction with water. The amount of free fatty acid formed is determined by:

- a. Degree of contact with water.
- b. The temperature during the period of contact with water.
- c. The presence of catalysts.

You probably already know that catalyst is a term that chemists use to explain something they do not entirely understand. Fat splitting catalysts are less puzzling than most, however, for some of them promote emulsions which means that either water is broken up in small droplets and suspended in the fat, or that fat is broken up in small droplets and suspended in the water—and sometimes both occur simultaneously.

In either case, an emulsion of fat and water gives a big increase in the area of contact between the two materials and thus promotes increased splitting. Another



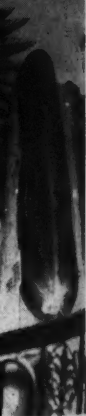
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18, 1952

type of catalyst increases the solubility of water in the fat and is even more effective in causing free fatty acid increase than the type causing suspensions, but both are bad.

Finely divided solids of any sort generally promote, or at least stabilize emulsions, and finely divided cracklings behave in this way. Phosphatides are present in all meat except perhaps fatty deposits and are released:

- a. When the tissues are broken down by standing too long before cooking.
- b. When the meat is overcooked, particularly in the presence of too much water.
- c. When cracklings "sour" while still in contact with the fat.

The phosphatides as a group are fat soluble and they are what a chemist calls good dispersing agents, by which he means they keep solid materials in suspension and slow down their rate of settling. Thus we can have the products released by decomposed meat keeping other finely divided and often glue-like material in suspension in the oil. Water is almost always present under such conditions and is very difficult to remove. This is obviously an ideal condition for splitting the fat to form fatty acids and it takes only a short time to ruin good tallow. This is illustrated by a test made in our laboratory with a clean dry tallow.

After 75 days storage at 120°F., the FFA had increased from 3.6 per cent to 4.1 per cent, a total of 0.5 per cent. To another sample of the same tallow was added 1 per cent of finely ground high grade cracklings and 1 per cent of water. Little change was noticed for the first two or three days while the cracklings soured, but if the latter had been from either partly decomposed or overcooked meat, splitting would have started immediately. As it was, however, the FFA jumped to 6 per cent within two weeks and then more slowly to 10 per cent at the end of 75 days. Color also deteriorates under such conditions.

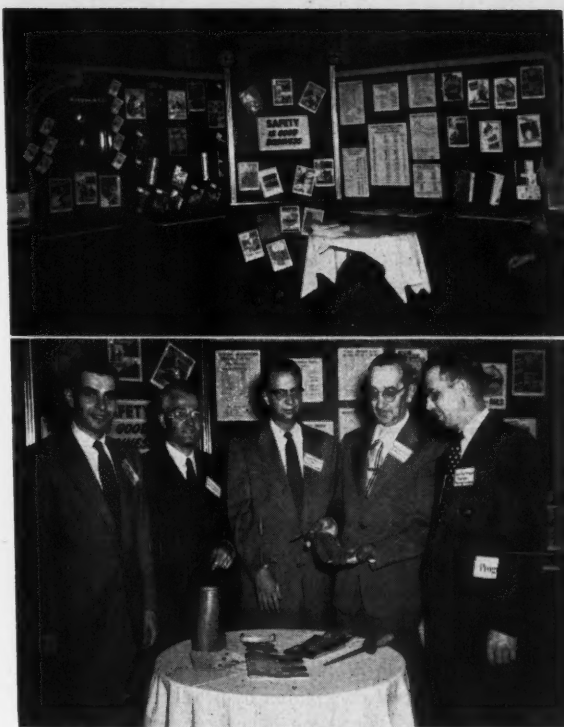
You may be interested to know why FFA is so important to soapmakers. First, it means that some glycerin has been lost. Second, refining becomes increasingly more expensive with increasing FFA and we quickly reach a ceiling beyond which it is impractical to go. And third, FFA is a fairly reliable index to the general abuse a fat has suffered, which, in turn, affects both the processing costs and the quality of the finished soap.

MIU: This term is, of course, an abbreviation for moisture, insoluble impurities, and unsaponifiable material. Since all of them are normally minor items on a percentage basis, the combined total is sometimes used as though it were a unit. The sources and the effects of these impurities on the fat are entirely different, however.

MOISTURE: A small amount of moisture is soluble in fat but this amounts to only a few tenths of 1 per cent. Any increase above that level means either that free water is present and will settle out if the fat is clean, or that it contains water emulsifying and solubilizing impurities. In any case, the water should be removed as soon as possible, for it speeds up deterioration and also makes it difficult to get an accurate sample on delivery.

The most common cause of water being present in tallow is probably the practice of clearing the pipelines with a steam blow-out and allowing the blow-out to go into the tank along with the fat. This is bad practice and ought not to be tolerated.

Compressed air should be used instead, but if steam must be used, by all means provide a separate small tank



SAFETY ACTIVITIES featured animated display material in the safety exhibit, top photo. Safety committee members on hand to answer questions were: Lawrence Hill, National Safety Council, Chicago; R. A. Harschnek, Swift & Company, Chicago; Howard Rebholz, The Rath Packing Co., Waterloo; Martin Cornetisch, John Morrell & Co., Ottumwa, and Jack Rushmeyer, The Rath Packing Co.

to receive the blow out, and re-handle the wet fat promptly to remove the water. Leaky heating coils are probably the second most common cause of wet fat, and they should, of course, be repaired promptly.

INSOLUBLE MATERIAL: The commonest and most objectionable insoluble material in tallow is the finely divided and glue-like material that comes from the rendered meat. Its presence is shown by a reduced rate of filtration. It speeds up deterioration, and it adds to processing costs.

UNSAPONIFIABLE MATERIAL: By this is meant impurities other than the above, which will not combine with caustic to form soap. The best tallow or grease will contain a small amount, perhaps 0.2 per cent, but anything above that has been added by unfavorable handling. Failure to render promptly, or the use of unwashed offal, will increase the unsaponifiable content somewhat, and the mineral oil used for oiling your tables and equipment is another source. The latter tends to show up particularly in the catch basin fat. Since unsaponifiable material is not only useless from the soapmaking standpoint, but is downright harmful to the performance of the soap, the importance of minimizing the amount in the tallow is obvious.

You will note that in the foregoing, I have spent much more time discussing the reasons for poor results and the remedies than I have on simple statements of fact. If we strip out the explanations, the whole discussion can be summarized in one sentence, namely, in order to produce a high proportion of Fancy tallow or Choice white grease,

the material you use must be handled promptly; it must be clean; it must be properly cooked to the right end-point; the fat must be cleanly separated from the cracklings; and it must be stored in a dry condition at moderate temperatures without any blending or contamination with lower grade fats.

If deviations from the above are permitted, the quality of the fat produced will suffer, and the degree of deterioration will depend on the circumstances.

And now in conclusion, I want to point out that the inedible fat you produce is only *one* of your *minor by-products*, but it is the *major raw material* for soapmakers. For that reason, we are very much interested in the quality of your production, and we are glad to cooperate with any of our suppliers who have quality troubles.

Scientists Report on Research Work

CHAIRMAN: I have been extremely interested in Mr. Duncan's comments on the effects of low temperature rendering of tallows and greases and I am curious to know what the effect of low temperature rendering has been on the important companion by-products, meat scrap and tankage. Dr. Wilder, you have been working along that line. What can you tell us about that?

WILDER: We have already heard about ways to improve the quality of dry rendered lard, tallows and greases. Low temperature rendering has received a lot of attention recently, and it will produce good animal feed. We must be sure though, that the moisture content is low enough in the finished product, and that it has been heated enough for complete sterilization. We must remember, also, that some of these proteins that are used for animal feeds have a higher value after they are heated than before. The collagen protein, for instance, is more digestible after heating. It appears to me that in any normal rendering operation, the fats are more sensitive to heat than in the meat protein; and if the fats are not overheated the protein material will not be damaged.

BUETTNER: You mentioned sterilization. Why is that so important?

WILDER: Sterilization of meat scrap, tankage and bone meal got a lot of attention this year because of the anthrax scare this past winter and spring. With all the talk about anthrax, I don't know of a single case where domestically produced products were involved except where they had been mixed with other contaminated materials. The temperatures reached in ordinary dry or wet rendering of all inedible products in this country are high enough to destroy anthrax spores.

Several low temperature rendering methods have been proposed, and I understand that a Swiss method heats only to 165° F., which I don't consider high enough for sterilization of inedibles. If rendering is to be done at that temperature, some other way must be found to sterilize the product.

DeBEUKELAER: How about cold sterilization? Would that offer a solution of this problem?

BUETTNER: No. Perhaps sometime in the future, but definitely not now. While cold sterilization might be used on some high cost product, the expense involved would

make it entirely impractical at present for this type of product.

WILDER: Can you tell us, Mr. Buettner, what is meant by cold sterilization?

BUETTNER: Well, as you know, the usual method of sterilization is by heating a product to an internal temperature adequate to kill any micro-organism or spores that might be present. Cold sterilization employs an entirely different principle. Temperature, either hot or cold, is not involved.

Actually, you can achieve "cold sterilization" by either of two methods. One way is to utilize a man-made gadget, like the linear accelerator, or the capacitron or the Van de Graff generator to bombard the product with very high speed electrons.

The other method is to expose the product to rays emitted by some radio-active substance, just as the medical men might use radium or X-ray. In this case, of course, you would have to irradiate the whole product in such a way as to kill any micro-organisms that might be present but at the same time avoid any deteriorating effect on the product.

DeBEUKELAER: Is cold sterilization practical?

BUETTNER: For some uses, yes. It all depends on whether or not you can achieve a sufficient intensity and control of the irradiation to do the job, at a cost you can afford to pay.

At present, bombardment with electrons is limited in application and too costly for most purposes. As far as exposure to radio-active materials is concerned, this is still in the experimental stage. A number of studies are underway.

The Foundation, for example, now has a grant from the Atomic Energy Commission to experiment with the



TOP: Murray T. Morgan, consultant, Washington; E. J. Cronkhite, USDA, Washington; Paul C. Doss, Quartermaster Corps, Chicago, and General C. A. Hardigg, Continental Can Co., New York.
BOTTOM: Gene Crousore, John F. Shiel and M. H. Heringlake, Indianapolis, and C. H. Watts, Ft. Worth, all of M. A. Delph Co.

use of radio-active fission by-products in "cold sterilization" of meat and meat products. In this connection we will be studying the effect of irradiation on pigmentation, on the enzyme systems in meat and on bacterial content. In other words, we want to know what changes would be induced in the product and whether it would be possible to put these fission by-products to use in the meat industry. The AEC, of course, is seeking a use for such material, which currently is waste.

DOTY: To get back to the original discussion, how do you know what temperatures are reached in dry-rendering? Isn't it rather difficult to get a thermometer into a melter?

WILDER: We have installed three different types of measuring devices in our pilot melter. The first measures the temperature of the vapor in the vent line; the second measures the average temperature of the material in the melter directly, and the third measures the temperature at the interface between cooker shell and the layer of fat or protein material in contact with it. If any burning takes place, it will be at this interface, and when we speak of maximum temperatures, it is this temperature at the interface that we want to measure.

WILDER: What do you find is the effect of temperature control on lard?

DOTY: Since lard is sold directly to the consumer, who has been educated to expect a white, almost bland product, any variation in color and flavor is immediately evident. The Service Laboratory has had the opportunity to cooperate with many producers in improving their lard in this respect. Laboratory analysis plus advice about proper cooking temperature and sound methods of handling have often brought a definite improvement in quality.

DeBEUKELAER: What other factors, besides temperature, affect the stability of lard?

DOTY: Low stability lard seems to plague some producers in spite of their efforts to improve it. We recently worked with a packer on this problem. In checking his plant, a number of iron fittings in the lard lines were found to have brass seats which, until this investigation, were not suspected. The presence of brass or bronze fittings in the lard system was proved by the late Dr. Vibrans and others to have a very definite effect on the keeping

time. It might be well that producers who are having low stability lard check their systems thoroughly for any hidden brass or bronze fittings.

WILDER: The Service Laboratory must receive a variety of samples for analysis and some rather unusual requests for service, doesn't it?

DOTY: That is true. Along with a large volume of routine products we have received several unique requests. One that I recall was an envelope of dead insects sent from South America. These were submitted by a dry casing producer who advised they had infested his plant and product to the extent that the sample of casing sent in looked more like lace than casing. We had seen and identified these insects on a previous occasion as a type of skin beetle that is particularly destructive to any protein substance. In fact, the curator of the Chicago Museum of Natural History advised me that they used them to clean and remove tissue from tiny animal skeletons.

DeBEUKELAER: The Service Laboratory has the advantage of using other departments of the Foundation, has it not?

DOTY: Very definitely. In fact, since the organization of AMIF the lab has had occasion to use either the knowledge or service of all the other departments in handling analyses or requests submitted to the Service Laboratory. This has been particularly true of the bacteriology department which has cooperated with us on innumerable cases of product failure due to bacteriological condition in canned and processed meats. On the other hand, all research divisions of the Foundation call on the Service Laboratory for necessary analytical work.

DeBEUKELAER: Do any of these service problems ever lead to research projects in the Foundation?

DOTY: Yes, for example, one research project in the Foundation, due to an analysis made by the Service Laboratory, gave us some satisfaction. Though its significance is not so important, it did add to our knowledge of animal fats.

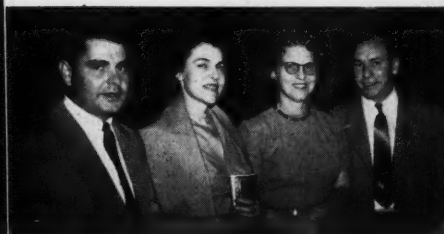
A shipment of tallow originating in a kosher sausage plant had a titer so far below the generally accepted value for tallow that the buyer felt he had been shipped grease instead of tallow. Investigations showed that the tallows had been rendered from beef briskets. Known samples of brisket fat were rendered at the Foundation under the

LEFT: G. L. Childress, executive vice president, Roegelein Provision Co., San Antonio, Tex., and Mrs. and Dorothy Ann Childress.

RIGHT: Mrs. H. A. Hensel, daughter Arline, and Henry A. Hensel, owner, H. A. Hensel Tying Machine Co., Milwaukee.



BELOW: Don Barraca, Transparent Package Co., Memphis; Mrs. Wm. Hoagland, Marhoefer Packing Co., Muncie, Ind., and Mrs. and D. J. Moir, East Tennessee Packing Co., Knoxville.





ROBERT M. MEYER, plant superintendent, Illinois Packing Co., Chicago.



MRS. M. O. SIMPSON, president, Mixers, Inc., Philadelphia, Pa.



BOB McKINNEY, Davidson Commission Co., Chicago.



direction of Dr. Dugan and analysis was made in his department and the Service Laboratory. Lower titer and higher iodine value were found in nearly all types of brisket beef fat than had been suspected previously.

DOTY: DeBeukelaer, Mr. Braun has told us this morning how dry rendered lard of improved quality may be produced. Are there any new developments with respect to further improving the performance of lard as a shortening agent?

DeBEUKELAER: Yes, one of the recent developments leading to this objective was disclosed in a U.S. patent (No. 2,571,315, issued August 16, 1951 and assigned to Armour and Company). The texture and plastic range (of lard) is said to be strikingly improved by this process which effects a rearrangement of the fatty acids of the glyceride molecule. This rearrangement is produced by heating lard in the presence of a catalyst and results in a product of changed crystallizing behavior which probably is responsible for its enhanced quality as a shortening agent.

BUETTNER: Associated with the question of improved performance of shortenings compounded from lard, there is the problem of stabilizing the product against the development of rancidity. Is there anything new in this field?

DeBEUKELAER: The recent approval by the BAI for use of monoisopropyl citrate in animal fats and shortenings containing animal fats constitutes the latest addition to the list of approved agents.

Claims made for the agent include improved solubility in fats over citric acid and a synergistic effect on antioxidants simultaneously present in the product which is similar to the effect of citric acid. It must be realized that neither monoisopropyl citrate nor citric acid are antioxidants in themselves, but rather they are synergists that enhance the action of the antioxidants.

BUETTNER: The practice of adding antioxidants to prevent rancidity in edible fats is well established. What is the situation with respect to animal feeds?

WILDER: Most meat scrap and tankage doesn't stay around long enough to go rancid but occasionally we do find a sample that turns rapidly. Antioxidants can pre-

KARL EHMER, OWNER, Karl Ehmer, Inc., Glendale, N. Y.; Mrs. Karl Ehmer; A. G. Ackermann, president, Mrs. A. G. Ackermann; Miss E. Ackermann, purchasing agent, The Kerber Packing Co., Elgin, Illinois; and Laurence W. Pfaelzer, president, Independent Casing Co., Chicago, Ill.

IN AMERICAN MEAT INSTITUTE FOUNDATION'S BOOTH: Herbert L. Hunn, treasurer, John E. Smith's Sons Co., Buffalo; Leo B. Lavin, president, The Sugardale Provision Co., Canton, Ohio, and standing, Dr. Hsi Wang, histologist, American Meat Institute Foundation, Chicago.



vent this rancidity also. BHA or AMIF-72, which is a mixture of BHA, propyl gallate and citric acid, added in the melter has greatly extended the stability of the fat—not only the fat drained and pressed out, but also the residual fat in the meat scrap. We are doing further work along this line because it looks rather promising.

DOTY: Incidentally, what do we mean by quality in meat scrap and tankage?

WILDER: Quality in meat scrap and tankage means different things to different people. I usually think of

quality as referring to the nutritive value, but I find that many of the customers in the feed industry think of color, odor, texture and uniformity of protein content.

Color and odor can vary depending upon what tissues are being rendered and put into the feeds. Texture is important to the feeder—he doesn't want meat scraps containing pieces of bone larger than a chicken can eat. Fortunately, texture is easily controlled. The feed trade usually likes the product ground so that over 95 per cent will pass a U.S. No. 10 screen having 2 mm. openings. Some of the folks in the West are asking for a 98 per cent pass through the 2 mm. screen. We made a survey sometime ago, and found samples that contained as much as 13 per cent coarse material retained on the 2 mm. screen. Most of the samples had only 0.2 per cent or less retained on the screen.

DOTY: Are there any new developments in the animal protein field with respect to vitamins?

WILDER: Animal proteins contain growth factors that are still unidentified. At times in the past when new vitamins were discovered, some people believed they had finally isolated the last of the valuable principles of animal proteins. This happened a number of years ago when riboflavin was discovered and identified in meat scrap and tankage. It happened again when vitamin B-12 was isolated and found to be a constituent of these meat proteins.

Now we find laboratories reporting even newer growth



Sam Sigman, president, K. & B. Packing Co., Denver, and Leonard Hantover, president, Phil Hantover, Inc., Kansas City, Mo.



Chuck Hutchinson and Gary Rabiner, both of Transparent Package Co., Chicago.



Chester A. Olsen, Chester A. Olsen & Co., Chicago, and R. F. Norris, R. F. Norris & Associates, Chicago.



A. P. Lovell, Griffith Laboratories, Inc., Chicago, and Carl Lasher, vice president, H. A. Smith Packing Plant, Port Huron, Mich.



FAMILY PORTRAIT: Coreys pose with sons and daughters-in-law. **FRONT ROW:** Mrs. Bruce Corey, Mrs. David Corey and Mrs. Dick Corey. **CENTER ROW:** Bruce Corey, Austin, Minn., David Corey, Fremont, Neb., both of Geo. A. Hormel & Co., and Dick Corey, Union Livestock Commission Co., Scottsbluff, Neb. **REAR ROW:** H. H. Corey, president, Geo. A. Hormel & Co., and Mrs. Corey.

factors—workers at the Bureau of Animal Industry, USDA, for instance, have reported an unidentified chick growth factor in meat scrap and several other materials, which stimulates the growth of chicks that are fed rations complete in every known nutrient, including vitamin B-12. They added antibiotics and arsonic acid for good measure, but still got increased growth from the meat scrap.

BUETTNER: Are there any growth factors in fats?

WILDER: Yes. Fats also appear to contain growth stimulating factors, and the fats plus the cholesterol in meat scrap or blood meal often stimulate growth by counteracting a check-growth inhibitor that is found in some alfalfa meals. Don't get me wrong on alfalfa meal. It is an excellent feedstuff, but we can go to higher levels of alfalfa meal if meat scrap or blood meal is included in the ration.

DeBEUKELAER: We are always looking for new outlets for fats and oils. Are there any promising developments along that line?

DOTY: At the Eastern Regional Research Laboratory a research program having this objective is underway. Considerable progress has apparently been made, judging from reports emanating from there.

WILDER: What are some of these things they are doing there?

DOTY: Well, for example, derivatives of fatty acids obtained from fats and oils have potential use in such fields as high pressure lubricants, in dehydration of drying oils, as leveling agents for paints, plasticizers for synthetic resins and as a precursor of di-basic acids.

The di-basic organic acids are of promise since they are convertible into a product that might serve as one of the essential raw materials in the production of synthetic fibers, analogous to the use of adipic acid in the preparation of nylon.

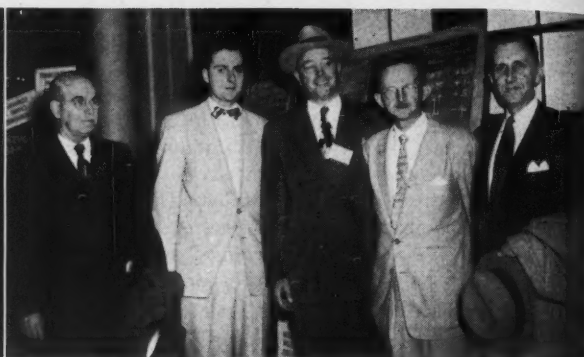
BUETTNER: Are there other potential outlets for surplus inedible fats and oils?

DeBEUKELAER: An American Meat Institute Foundation bulletin soon to be published will present results of a research project dealing with possible use of inedible fats in dry dog foods and poultry rations. This work



LEFT: Gus Nick, A. W. Heintz, Syracuse, New York; R. A. Gockley, V. C. Alexander and Cecil Elliott, Chicago, all of the Carrier Corporation.

RIGHT: R. J. McLaren, architect, Chicago; Earl Wetzel, assistant to the president, Stark, Wetzel & Co., Indianapolis; W. W. Morgan, president, Arctic Engineering Corp., Chicago; E. K. Wetzel, vice president of Stark, Wetzel & Co., and H. B. Howe, president, Howe Ice Machine Co., Chicago.



developed basic information regarding the nutritional performance of pups and chicks fed diets containing graded levels of inedible animal fats. It also established an effective method of stabilizing such feeds against rancidity development through the addition of suitable antioxidants.

Results of feeding tests were quite satisfactory and suggest the practicality of adding by-product animal fats to dog and chick feeds. The importance of this information to the producers of inedible fats can be appreciated more fully when it is realized that an increase of 4 per cent in the fat content of such feeds will consume about 200,000 tons of fat, or about 1/5 of the annual production of animal fats.

DOTY: We have just discussed problems concerning surplus fats and oils. What about surplus hog hair and chicken feathers?

WILDER: Some of these by-products may find a use in feeds and thereby relieve a great disposal problem. Chicken feathers, for instance, are becoming a problem in the broiler producing areas. We are finding that feathers can be processed and fed back to the chickens when mixed into the right kinds of feeds.

Since hog hair protein is in some ways related to feather protein, we are working on that too. Hog hair presents a different problem in that heating makes it more undigestible. We are working on unheated hair, which does seem to have some feed value.

Last but not necessarily least, chicken manure contains a high level of vitamin B-12, and when sterilized and dried it may serve as a vitamin B-12 source. This, again, might be of interest only in the broiler producing areas.

DeBEUKELAER: Dr. Urbain has discussed problems relating to color in cured meats, as produced by conventional curing methods. I recall that last year the thermo-cure process was discussed at the scientific and operating section. Has anything new been developed during that time?

BUETTNER: When the thermo-cure process was discussed last year comparatively few operational data were available. During the last year, however, more companies are using it and a number are trying it on an experimental

basis. We know of one large plant where virtually all the bacon that is sliced and pre-packaged is cured by the thermo-cure process.

We have carried out experiments in the American Meat Institute Foundation laboratories, comparing thermo-cure with regular cured bacon. Results have indicated that the thermo-cure bacon has held up better in storage than the regular cured product. The regular cure became stale after two weeks while the thermo-cure bacon became stale after eight weeks storage at 35° F. After ten weeks the regular cure bacon was judged rancid while the thermo-cure bacon was stale but not rancid.

Recently, workers at the University of Illinois (Johnson and Bull, *Food Technology* 6, 354-58, 1952) made a study on accelerated cures for bacon. By using essentially the same general procedure as thermo-cure, that is, suspending green slabs in a circulating, heated curing solution, they could obtain a bacon which was cured in 18 to 30 hours and which compared favorably with a 21-day dry box cured bacon.

WILDER: Is flavor affected by this high temperature cure?

BUETTNER: In our tests, the flavor seemed quite bland and oft times certain flavors not normally associated with bacon were noted. It would certainly appear that more basic studies are indicated on accelerated cures.

DeBEUKELAER: You have been discussing accelerated cures using pickle. How about an accelerated dry cure?

BUETTNER: I can see you have visited the exhibits already. You no doubt are referring to the recently developed "Penetronic cure." We have had occasion to discuss this process with the people who developed and patented it. We have also visited the plant where tests are going on now.

Actually, the rationale of the process is simple. It merely attempts to hasten the penetration of the curing ingredients by perforating the green belly with a large number of holes or "pores." The slabs are then laid down, usually on skids, since boxes are not needed, and each slab covered with a dry prepared curing salt.

According to the developers of this process, a desirable cure can be obtained in two or three days. Some of the advantages claimed are: (1) short curing time, (2) uniform color development, (3) highest yield of No. 1 bacon out of slabs and (4) curing at higher temperatures—45 to 48° F. Naturally, as in the other accelerated cures where elevated temperatures are employed, strict sanitary measures must be employed. However, in order properly

to evaluate this new curing process, a more detailed and extensive study would have to be made.

WILDER: You have mentioned sanitation, and at some of yesterday's sessions sanitation was the theme of several talks. Tell us, Mr. Buettner, what the Foundation is doing about this problem?

BUETTNER: We at the Foundation are always cognizant of the importance of sanitation in the meat industry. In the division of bacteriology we have observed many instances where spoilage, such as green discoloration of sausages, sliming and swelling of canned meat items, is due in a large part to poor sanitary practice. We are cooperating with the Institute's committee on bacteriology in preparing a bulletin or manual on sanitation. The plan is to set up certain standard operating procedures to be used in meat plants where a formal sanitation program is lacking. In this way we hope to be of greater service to the meat industry.

DeBEUKELAER: Speaking of cured meats, I understand that the BAI now permits the use of certain new compounds in curing. What is this all about?

BUETTNER: No doubt you are referring to MID memorandum No. 175 (dated February 11, 1952), which allowed the use of di-sodium phosphate in pumping pickle for cooked and canned hams, pork shoulder picnics and the like. This ruling allows the use of no more than 5.0 per cent di-sodium phosphate in the pumping pickle with no more than 0.5 per cent in the finished product.

DeBEUKELAER: What's the purpose of adding it?

BUETTNER: The primary purpose is to reduce shrinkage. The data we have seen indicate that this shrinkage is reduced by approximately 2 per cent. It is also claimed that the finished product has less tendency to fade on standing. Incidentally, this use of di-sodium phosphate is covered by patent (assigned to Swift & Company, No. 2,596,067, May 6, 1952).

It is also interesting to note that Calgon—which is a water softening agent and chemically known as sodium hexametaphosphate—is being studied as a possible ingredient in curing formulae. The use of this ingredient is covered by a U.S. patent (2,513,094) issued June 27, 1950, and assigned to the Hall Laboratories, Inc. Just recently a packer was granted permission by the MID to conduct tests using Calgon in curing pickle. According to the patent, this compound is supposed to inhibit undesirable color changes in cured meats. It also claims greater retention of the natural moisture in the finished product.

DOTY: I believe, DeBeukelaer, you presented a report before the scientific and operating section last year on a project concerning another important by-product of the

industry. What has developed in the field of cured hides during the past year?

DeBEUKELAER: Many in the audience will recall it was reported then that two procedures had been developed for the pre-cure removal of manure from green hides. We are able to report this morning that subsequent study of hide samples subjected to the proposed treatments did not demonstrate sufficient alteration in hide fibre structure to condemn either process on this basis.

Pilot scale tests were made at two meat packing plants, using the treatments on approximately 250 hides which were then cured along with control lots by either green salting or brining. Subsequently, they were shipped to upper leather and sole leather tanneries for conversion into leather.

DOTY: There are probably others besides myself who do not remember what there pre-treatments were. Would you refresh our memories?

DeBEUKELAER: The pre-treatments consist of soaking green hides in a solution of either urea or a mixture of detergents for a suitable time.

BUETTNER: You mentioned something about control lots. Can you expand on that?

DeBEUKELAER: In judging the effects, if any, that these pre-cure treatments of green hides had on finished leather, it was necessary to compare the product with that obtained from identical hides that had undergone the same processing from flaying to finished leather except that of the pre-cure treatment. Obviously, it was impossible to subject one and the same hide in its entirety to both procedures. Fortunately, we were able to benefit by the work done under Dr. O'Flaherty's direction at the Cincinnati laboratory during the first year of our joint hide research project. I refer to the fact that his associates demonstrated that the right and left sides of steer hides and calf skins were chemically and, therefore, most likely structurally identical. By splitting each hide involved down the backbone line and using one half in the pre-treatment and the other half in all other steps of the processing, we were assured of as nearly identical lots as could possibly be had.

DOTY: Does this conclude the work on cured hides at the Foundation?

DeBEUKELAER: No, indeed. Many of our listeners know that the expanded program for further study in the reduction of non-leather forming components of cured hide suggested at this time last year was adopted by the Institute's hide committee and recommended to the beef slaughtering members for their support which has been widely and wholeheartedly given.

This extended program will involve studies of the ex-

LEFT: C. H. Bowers, partner, and J. M. Crandell, manager, both of Rosevale Packing Co., Dewitt, Mich., and Carl Anderson, Egan and Anderson Co., Omaha.

RIGHT: John H. Bryan, secretary, Bryan Bros. Packing Co., West Point, Miss.; L. B. Harvard, vice president, and J. L. Roberts, president, Sunnyland Packing Co., Thomasville, Ga.





tent of reduction in moisture and salt contents attainable within the limits set by operating prerequisites of the producer and the converter of this commodity. It will also include a study of the benefits to be derived from removing fleshings and hair before curing rather than after liming at the tannery.

DOTY: Will such changes from long established practice require a new basis for merchandising cured hides?

DeBEUKELAER: Oh, yes! One phase of the hide research program at the Cincinnati laboratory is directed to this end. It will enable the seller and the purchaser to trade on the basis of the potential leather-making content as determined by quantitative measurements.

BUETTNER: Can something be done to modify this product so that it will produce leather having all the good features but none of the disadvantages of the synthetic compositions.

DeBEUKELAER: That is a big order, in view of the present state of knowledge concerning the chemical structure of the natural protein collagen which is the basic material for the production of leather. However, much fundamental information has been developed in recent years by X-ray diffraction and electronmicroscope studies of this protein. I think we can confidently look forward to the ultimate solution of the mysteries of collagen structure. But, in the meantime, vigorous promotion of the splendid natural qualities of leather is required to meet the competition of synthetic products. The importance of the latter can be appreciated more fully when it is realized that the per cent of civilian new shoe production having all leather soles reached the all-time low of 40.6 per cent, as of June 1952.

WILDER: Ladies and gentlemen, in the short time available we have only been able to present some of the highlights in things that are new in research relating to the meat industry. Members of the Foundation staff will be glad to talk to any of you who may be interested.

1. Edward Emge, livestock buyer, and Walter Emge, assistant secretary-treasurer, both of Emge Packing Co., Fort Branch, Ind.; W. S. Johnson, president, W. S. Johnson Packing Co., Owensboro, Ky.; C. L. Elpers, secretary-treasurer, Emge Packing Co., Fort Branch, and Dr. H. R. Kraybill, director, American Meat Institute Foundation, Chicago.

2. Roy Callahan, credit manager, and Frank McGuire, treasurer, both of the Rutherford Food Corp., Kansas City, Mo.; Mrs. and Edward Karp, president, Omaha Packing Co., Boston, and T. E. Colescott, manager, beef department, Geo. A. Hormel & Co., Austin.

3. G. B. Cook, president's office, Swift & Company, Chicago; Frank Crabb, account manager; Sylvester Story, superintendent; C. C. Emberton, special services, and Mike Harper, superintendent, all of Kingan & Co., Indianapolis.

4. Wm. Schwabe and Richard Jameson, Pueblo Col.; Morris A. Nossov, Lincoln, Neb.; H. P. Heidel, Pueblo; Owen Limberg, and Fred V. Foster, Philadelphia, Pa.; all of American Stores.

5. A. J. McCullough, sausage division, Wilson & Co., Chicago; Sam Smith, dry sausage, Rath Packing Co., Waterloo; L. H. McLain, sausage division, and C. A. Frank, sales promotion, both of Wilson & Co., and H. G. Johansen, fresh sausage department sales manager, Cudahy Packing Co., Omaha.

6. Fritz Katz, secretary, Stoll Packing Co.; Wm. M. Tynan, president, W. M. Tynan & Co.; Chas. Holzer, vice president, C. Holzer Co., and Steve Juratovic, sales, Ac'cent, all of New York City; L. D. Horodenski, sales manager, and Carl Grafing, plant engineer, both of John Krauss, Inc., Jamaica, New York.



Sausage & Merchandising

"The Outlook for Sausage and Meat Supplies" by J. Russell Ives — "Your Changing Customer" by Mrs. Jean Wade Rindlaub — "Trends or Traditions in Meat Merchandising" by Frederic E. Zeuch.

Livestock and Meat Supply Picture



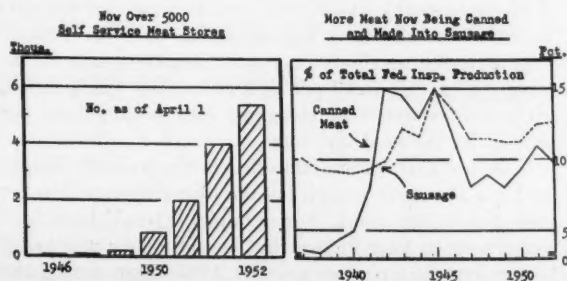
IVES

IN PREPARING FOR THIS talk I reviewed the material we used a year ago, and particularly those figures which we so carefully labeled "tentative estimates." Unfortunately, I must admit that some of these estimates were something less than 100 per cent accurate. Likewise, some of the estimates we shall discuss here today no doubt will prove to be wrong. However, we have done the best we can to spot the overall trends that are shaping up, and I sincerely hope that we will not be too far "off the beam" so far as the general picture is concerned.

Following the same procedure as last year, we have put together a set of charts and tables dealing with the meat situation. I shall try to point out the more important features of the meat situation, as we see them at the present time.

Let me first call your attention to the Figures 1, 2 and 3. These graphs represent only a few of the developments which are of significance to the meat industry, and to meat merchandising particularly.

We have shown in Figure 1 the rapid growth of self service meat stores. The number now exceeds 5,000, as against only 68 stores five years ago. As you well know this trend has numerous implications in all phases of meat distribution. In Figure 2 we've shown the growth of sausage and canned meats since 1937. Of our total federally inspected meat production, sausage now accounts



for about 12½ per cent and canned meats now represent about 10 per cent. These trends also have broad implications to you folks at the selling end of the industry.

Figure 3 shows the upward trend in population compared with total meat production and consumption. With our population growing at the rate of about 2,000,000 persons per year, we obviously will need much more meat 10 years from now, if we are to continue as a truly meat eating country. It is hardly necessary to point out that this situation involves all elements of the meat industry, from the livestock producer at one end to the retailer and the consumer at the other.

Let us now get into the meat situation with a quick glance first at the current feed supply as shown in Table 1. While it is true that prospects are excellent for the corn crop in most of the North Central states, this year's harvest of oats, barley and grain sorghum will be smaller than in the previous two years. Total production of feed grains, according to the September crop report, will equal about 117,000,000 tons. This is 2 per cent above last year, while the number of animals, including poultry, to be fed is down 2 per cent. Nevertheless, utilization of feed during the 1952-53 feeding year probably will exceed the total crop, and grain stocks next fall probably will be reduced somewhat further.

While we're not likely to be in serious trouble on feed in the year ahead, it is significant that our livestock population is crowding our feed supply, even at this level of livestock production.

With this brief background on the feed situation let us

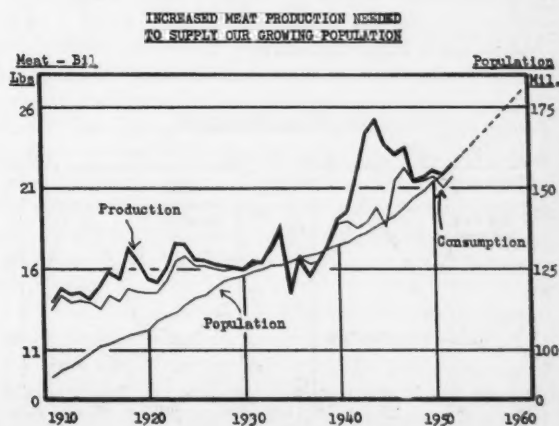


TABLE 1: CROP PRODUCTION AND FEED SUPPLY

Item	Units	Crop Year		1952-53 %		Change From
		1952-53*	1951-52	1950-51	1951-52	
Crop Production						
All hay	Mil. T.	102	108	102	-6	Small
Corn	Mil. Bu.	3,185	2,941	3,057	+ 8	+ 4%
Oats	"	1,264	1,316	1,410	- 4	-10
Barley	"	221	255	304	-13	-27
Grain sorghum	"	72	159	233	-55	-69
Feed Supply & Use						
Beginning stocks	Mil. T.	20	29	31	-30	-35
Production 4 grains	"	117	114	122	+ 2	- 4
Total supply	"	137	143	153	- 4	-10
Fed to livestock	Mil. T.	105	107	105	- 1	Small
Other uses	"	17	16	19	+ 3	-13
Total used	"	122	123	124	- 1	- 2
Ending stocks	Mil. T.	15	20	29	-25	-48
Animal units fed	Mil.	172	175	172	- 2	Same

* Estimates based upon September Crop Report. USDA.

* Estimates based upon September Crop Report, USDA.

now turn to hogs. In Figure 4 and Table 2 we have examined the relationships between slaughter and the pig crop for the past several years. We have two charts here, one comparing the pig crop with federally inspected slaughter, and the other with total commercial slaughter—that is, the total exclusive of farm slaughter. I should point out that in recent years enough new-crop hogs have been marketed by August that, for this purpose, we have figured the marketing year as beginning with that month.

You'll notice in the left hand segment of Figure 4 that while there is a fair relationship between federally inspected slaughter and the pig crop, it is not consistent enough to permit close accuracy in forecasting slaughter. However, in the right-hand chart, when we include the USDA estimates of non-federally inspected slaughter, the relationship between total commercial slaughter and the pig crop is quite close.

I should also call your attention to the fact that the figures for most of the years shown in the charts have been revised by the USDA, thereby improving the relation-

TABLE 2: PIG CROPS AND HOG SLAUGHTER

Year	Pig Crop			Slaughter*		
	Spring	Fall	Total	Fed. Insp.	Other Com'l	Total Com'l
1944-45	55.8	30.9	86.7	47.4	16.8	64.2
1945-46	52.2	34.6	86.8	43.8	19.1	62.9
1946-47	52.2	30.5	82.7	44.7	13.8	58.5
1947-48	52.2	31.1	83.3	48.1	12.9	61.0
1948	50.5	33.3	83.8	49.2	11.2	60.4
1949-50	57.0	36.2	93.2	55.9	12.4	68.3
1950-51	57.9	39.4	97.3	60.1	13.2	73.3
1951-52	62.0	40.2	102.2	63.8	14.5	78.3
1952-53 p	56.6	36.5	93.1	57.5	12.5	70.0
Ch. from Prev. Yr.	-9%	-9%	-9%	-10%	-14%	-11%

*Year beginning August. pPreliminary.

FIG 4: PIG CROP vs HOG SLAUGHTER

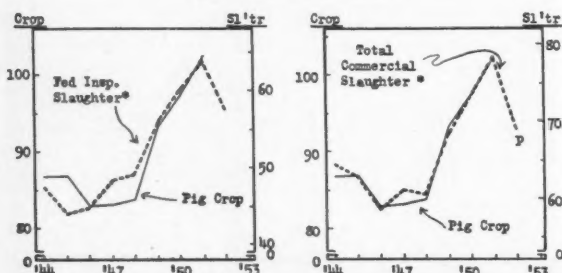


FIGURE 4

ships. But when we attempt to forecast hog slaughter from the pig crop report we have only the government's preliminary estimates to go on. While we think quite highly of the job the USDA is doing in the field of livestock statistics, we must remember that it is a tremendous task to obtain a "count of all the pigs in the country," and I think we should be rather tolerant of the revisions which frequently are made in their figures.

Because of the 9 per cent cut in hog production reported in the June pig crop report, I think we've all been expecting hog slaughter in 1952-53 to drop under the past year by a substantial number. Assuming that the final

WEEKLY HOG SLAUGHTER UNDER FEDERAL INSPECTION

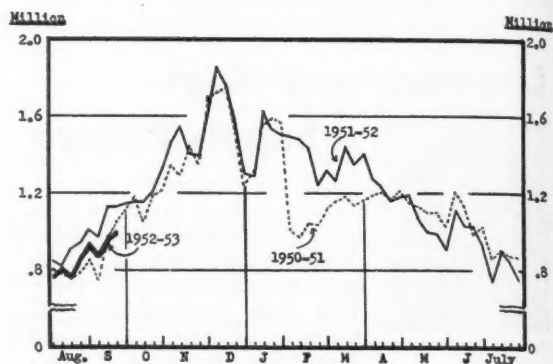


FIGURE 5

TABLE 3: PIG CROP AND SLAUGHTER DISTRIBUTION

Item	Million Head			1952-53	Change from 1950-51
	1952-53	1951-52	1950-51		
Pig Crop					
Spring: Dec.-Feb. 1/	13.0	13.0	11.0	Same	+18%
Mar.-May 1/	43.6	49.0	46.9	-11%	-7
Total	56.6	62.0	57.9	-9	-2
Fall: June-Nov.	36.5*	40.2	39.4	-10	-4
Total Crop	93.1*	102.2	97.3	-9	-7
Fed. Insp. Slaughter					
Aug.-Sept. (2)	7.8*	8.6	7.7	-9	+1
Oct.-Dec. (3)	17.2*	19.1	18.0	-10	-4
Jan.-Mar. (3)	15.5*	18.4	15.9	-16	-3
Apr.-July (4)	17.0*	17.7	18.5	-4	-8
Market year total	57.5*	63.8	60.1	-10	-4

6/ Break-down by months estimated from monthly sow-farrowing data.

* Preliminary estimates.

tally on the pig crop does not differ greatly from the 93,000,000 head now being estimated by the USDA, the charts suggest a total commercial slaughter for the year beginning in August of around 69,000,000 to 70,000,000 head. The federally inspected portion of this total has amounted to about 82 per cent during the past four years. With this variable taken into consideration, our estimate of federally inspected hog slaughter for the 1952-53 year is in the neighborhood of 57,500,000 head. As the table shows, this is 10 per cent below last year's figure, while total commercial slaughter may be about 11 per cent under the year ago total.

Now, not only are we interested in the probable slaughter for a 12-month period, but the distribution within the year also is important. For example, it would have been worth a lot to have known that hog slaughter was going to over-run the previous year by 25 per cent during the past February and March. This exceptionally large

slaughter in these two months shows up clearly in Figure 5.

In Table 3 we have indicated our ideas as to the probable pattern of slaughter for the current marketing year. Please note the little stars by these figures which indicate they are "tentative estimates." We do think, however, that it is unlikely we will again see the relatively distorted pattern of marketings that developed last winter.

Among the several factors which seem to account for the large slaughter late last winter was the liquidation of gilts which occurred at that time. This was due probably to the relatively low price for hogs after the first of the year, plus a developing shortage of corn on many farms. While we shall not attempt to predict next winter's hog price, the 8 per cent increase in the corn crop would seem to favor a more normal distribution of marketings in coming months.

This leads us to wondering what the 1953 pig crop will be—particularly the spring crop, much of which will be marketed by this time next year.

As shown in Figure 6 and Table 4, so far as we have been able to determine, the most important factor affecting farmers' production plans is the hog-corn price ratio. As you'll note from the charts, annual changes in the number of sows farrowed have been closely related to this one factor. Certainly there are others, but in the overall this one seems to carry the most weight.

At the moment, the hog-corn price ratio doesn't look as though it will be more favorable this fall than it was last. Also, as we've pointed out, the feed situation for the country as a whole actually is not as good as it was last year, despite the good crop in the Corn Belt. Thus, about the best we can do at this early date is to anticipate

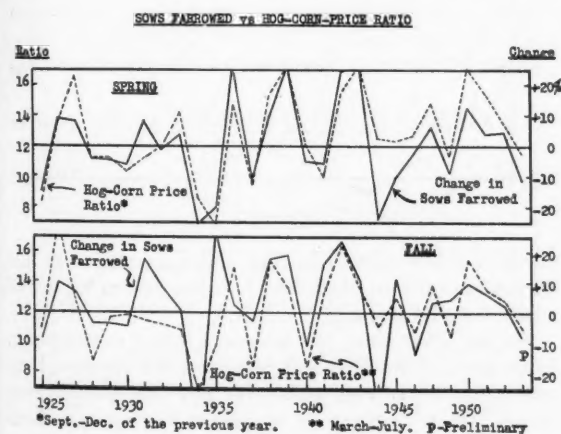


FIGURE 6

TABLE 4: PIG CROP AND FACTORS ASSOCIATED WITH CHANGES IN PRODUCTION

Years	Sows Farrowed (Million Head)		Hog-Corn Price Ratio Breeding Time		Hog Prices \$ per Cwt.	Corn Crop Billion Bushels
	Spring	Fall	Spring	Fall		
1944	9.2	4.9	12.5	11.1	\$13.10	3.1
1945	8.3	5.4	12.3	12.9	14.00	2.9
1946	8.1	4.7	12.7	10.8	17.50	3.2
1947	8.5	8.9	14.8	13.8	24.10	2.4
1948	7.8	5.1	11.3	10.4	23.10	3.6
1949	8.8	5.6	17.1	15.4	18.10	3.2
1950	9.2	5.9	15.4	13.5	18.00	3.1
1951	9.6	6.1	13.5	12.8	20.24	2.9
1952	8.5	5.6*	11.5	10.9	17.25*	3.2*
1953			11.5*			

*Estimate for September. *Average for 8 months. *Preliminary.

CATTLE CYCLE - 3 PERIODS OF INCREASING NUMBERS

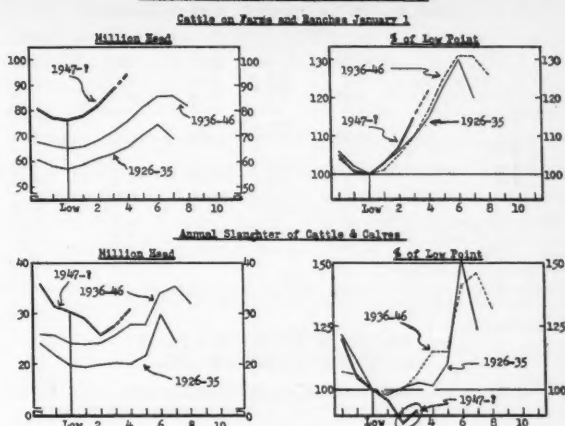


FIGURE 7

a 1953 spring pig crop of approximately the same size as this year's 56,500,000 head.

Now let's turn to the cattle and beef situation. In Figure 7 we have a set of rather complicated looking charts. The top charts show where we are in the present cattle cycle compared with two other periods of increasing cattle numbers. Each cycle is represented by one of the lines of the charts, that is, the years 1926 to 1935; 1936 to 1946, and 1947 to date. The left chart is in terms of million head. The one on the right is per cent change from the low point in the cycle. The important thing to note here is that in the four years since January 1, 1949, we have built up our cattle herds much more rapidly than in previous similar periods. This was due largely to the influence of price regulations upon cattle marketings. This is illustrated in the bottom pair of charts. Note particularly how slaughter has fallen below its normal pattern during the past two years. In other words, if cattle marketings had not been disrupted, we would have had every reason to expect total slaughter to have dipped slightly in 1950—as it did—followed by a moderate upturn in 1951 and greater increases in 1952 and 1953.

We have been asked to make a prediction of cattle slaughter for 1953. Actually, we don't have too much to go on, other than the fact that the normal pattern of cattle numbers and marketings, which we've described in these charts, has been thrown off balance. Instead of the gradual working of normal economic influences, cattlemen suddenly are faced with the possibility that their industry is in danger of becoming top-heavy, both with respect to feed supplies and demand conditions.

Hence, our feeling—and it can't be a great deal more than that—is that 1953 will see a rather substantial gain in total cattle slaughter. As shown in Table 5, even if cattle slaughter should increase to 31,000,000 head, which would be about 12 per cent more than this year, the cattle population could still increase by about 4,000,000 head during 1953.

With the "nervousness" which seems to have developed regarding cattle prices, it seems unlikely that producers will want to build up herds in 1953 by any more than 4,000,000 head. In military language this might be described as a "fluid situation." However, this much can be said: anyway you look at it, it seems pretty certain

TABLE 5: CATTLE NUMBERS AND SLAUGHTER						
Item	Million Head			1953 Change From		
	1953	1952	1951	1952	1951	
Jan. 1 Cattle Nos.	94.0	88.1	82.0	+ 7%	+ 15%	
Calf Crop	38.6	37.2	35.6	+ 4	+ 8	
Imports	.4	.1	.2	Large	Large	
	133.0	125.4	117.8	+ 6	+ 13	
Slaughter:						
Cattle	21.0	18.5	17.1	+ 14	+ 23	
Calves	10.1	9.2	8.9	+ 9	+ 12	
	31.0	27.7	26.0	+ 12	+ 19	
Other disappearance**	4.0	3.7	3.7	+ 8	+ 8	
No. end of year	98.0	94.0	88.1	+ 4	+ 11	

**Mainly death losses.

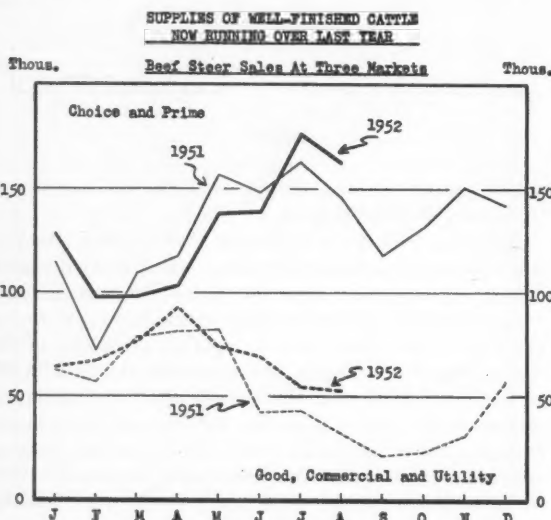


FIGURE 8

TABLE 6: FED CATTLE PROSPECTS					
Item	1952	1000 Head	1950	1952 Change From	
Feeder Shipments to C.B.		1951	1950	1951	1950
July	185	173	152	+ 7%	+ 22%
August	338	293	239	+ 15	+ 41
Sept.-Dec.		2,069	1,946		
Total		2,535	2,337		
Grass Cattle Marketings					
Thru August 13	355	267	305	+ 33	+ 16
		\$ Per Cwt.			
September 20 Prices					
Feeder Steers, K.C.	22.66	31.63	26.95	- 28	- 16
Choice Steers, Chi.	32.48	36.92	30.48	- 12	+ 7

that cattle and calf slaughter in the next three years will be materially larger than in the previous three years.

Always of considerable interest in the outlook for meat supplies by all segments of the meat industry are the prospects for well-finished beef. Some pertinent points with respect to this part of the meat supply are shown in Figure 8 and Table 6. We have plotted beef steer sales at Omaha, Chicago and Sioux City, by grades. While this is only a part of the total supply of such cattle, it illustrates the market seasonal nature of these grades of beef. The figures have been plotted through August, and it will be noted that supplies of both the upper and lower grades have been running materially above last year, when cattle feeding had been greatly curtailed as a result of price controls.

Regarding the outlook for cattle feeding in the coming

fall-winter season, there are several factors which affect the number of cattle put on feed. One of these is the profitableness of feeding operations in the previous year. By and large, cattle feeding results were not very favorable during the past season. Normally, this would tend to reduce feeding operations the next year.

Offsetting this, however, are the prospects for a good feed crop in the Corn Belt. Furthermore, feeders have become considerably more cautious than they were last summer, with the result that feeder cattle prices currently are running \$8 to \$10 lower than a year ago, compared with a \$5 drop in choice steer prices.

Whereas, there was a big rush to buy cattle direct from producers on the range last summer, contracting has been very slow this year. Apparently Corn Belt farmers have been content to wait for the grass cattle run to show up at the markets. This, together with the increased supplies of feeder cattle that are available, has resulted in substantially increased receipts of grass cattle at the central markets, compared with a year ago.

As shown in Table 6, shipments of feeder cattle and calves to the Corn Belt during July and August totaled about 12 per cent over last year and 34 per cent over two years ago. Thus, Corn Belt farmers are buying feeder

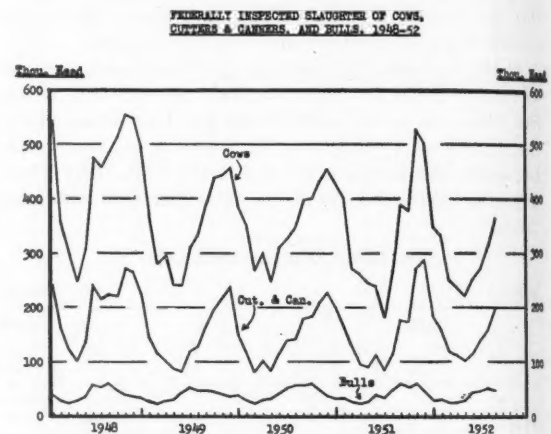


FIGURE 9

cattle in fairly liberal numbers, and it appears to us that in this area at least, there may be a new record volume of cattle fed this season.

On the other hand, the adverse weather conditions in large areas of the West and Southwest this summer, have been reflected in high prices for hay and concentrates, which will probably tend to reduce feeding operations somewhat outside the Corn Belt.

Now as to processing beef, which is of considerable interest to this group, in Figure 9 we have a chart showing the seasonal ups and downs in the federally inspected slaughter of cows, cutters and canners and of bulls. You'll note that the seasonal swings from the spring lows to the fall highs in these classes of cattle are quite pronounced. Incidentally, you can see that the season's peak in bull slaughter tends to be a little earlier in the year than the peak in canner and cutters.

You'll also note from Table 7 that the 1952 slaughter of cows, heifers and bulls is much lower than it was five years ago. The explanation for this is that in 1947 there was a substantial reduction in cattle herds, amounting to

TABLE 7: FEDERALLY INSPECTED CATTLE SLAUGHTER, BY CLASSES

Item	1952	1,000 Head	1947	1952 change from	1947
		1951	1951	1951	
Steers	7,100*	6,180	6,968	+15%	+ 2%
Heifers	1,300*	1,199	1,953	+ 8	-33
Cows	4,100*	4,008	6,030	+ 2	-32
Bulls	500*	492	573	+ 2	-13
Total	13,000*	11,879	15,524	+ 9	+16

*Preliminary Estimates.

about 3,500,000 head. However, during the past three years, we have seen a sharp increase in cattle numbers, accompanied by the holding back of breeding animals.

With respect to 1953, while we anticipate a sizeable increase in total cattle slaughter, we think the gain will be greater for steers than for cows. But by the following year (1954), with the turning-point in the cattle cycle near at hand, marketings of cows and bulls are expected to show a material increase over the relatively low level of the past two years.

Incidentally, it's worth pointing out that the growing use of artificial insemination in the dairy herds of this country is making itself felt in the bull population of several areas. For example, in New York State, which is principally a dairy area, the number of bulls on farms has declined from around 4½ per 100 cows in 1945 to a shade over three per 100 in 1952.

This has definite implications to sausage manufacturers—to say nothing about the bulls. It means, of course, that bull meat probably will show a declining trend in its contribution to sausage materials in the years ahead.

Now for a brief analysis on lambs, which is outlined in Figure 10 and Table 8. Last year we pointed out that the long downward trend in the sheep population has been halted and that a gradual rise in numbers could be expected. This still holds true with this exception—because of unfavorable weather in much of the major sheep-producing area, 1952 lamb marketings have been mate-

STOCK SHEEP AND LAMBS ON FARMS AND RANCHES, JANUARY 1
FEDERALLY INSPECTED SLAUGHTER OF SHEEP AND LAMBS
1924-52

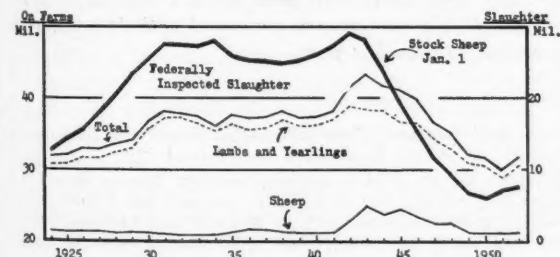


FIGURE 10

TABLE 8: SHEEP NUMBERS RISE SLOWLY

Year	Jan. 1 Total Number	Lamb Crop	Slaughter		Other Disappearance	No. end of year
			Total "Supply"	Fed. Insp. Head		
1942	56.2	32.3	88.5	21.6	4.0	55.1
1943	55.1	30.9	86.0	23.4	3.7	50.8
1944	50.8	28.6	79.4	21.9	3.5	46.5
1945	46.5	27.0	73.5	21.2	3.4	42.4
1946	42.4	24.5	66.9	19.9	2.9	37.5
1947	37.5	21.9	59.4	16.7	2.0	34.3
1948	34.3	19.6	53.9	15.3	2.1	30.9
1949	30.9	18.3	49.2	12.1	1.7	29.8
1950	19.8 Low	17.9	47.7	11.7	1.5	30.6
1951	30.6	18.0	48.6	10.0	1.4	31.7
1952*	31.7	18.4	50.1	11.8	1.5	31.8
1953*	31.8	18.7	50.5	11.5	1.5	32.5

Source of Data: Bureau of Agricultural Economics, USDA.

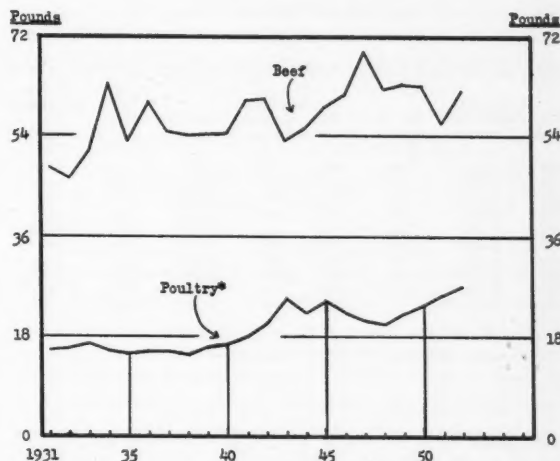
*AMI Estimates.

rially larger than last year, with the results that sheep numbers may show only a slight gain during the current year. Unless there is forced liquidation, marketings of lambs in 1953 may be a little smaller than in the current year.

We are getting more and more inquiries regarding poultry supplies as a factor in the meat situation. We don't claim to know a great deal about poultry, but with the help of some of our friends in this industry we have put together the data in Figure 11 and Table 9. From this

PER CAPITA CONSUMPTION OF POULTRY VS. BEEF

1931-1952



* Chickens & turkeys - eviscerated weight basis

FIGURE 11

TABLE 9: POULTRY PRODUCTION AND CONSUMPTION

Item	Unit	1953 Estimate	1952 Prelim.	1953 change from	1940
Chickens on Farm Jan. 1 (Excludes Broilers)	Mil.	435	453	438	-4% -1%
Farm Sales of Poultry					
Chickens (Live Wt.)	Mil. Lbs.	1,785	1,785	1,508	same +18
Broilers	"	2,800	2,650	414	+6 +576
Turkeys	"	950	1,000	509	-5 +87
Per Capita Consumption					
All Chickens	Lbs.	22.5	22.1	13.7	+2 +64
Turkeys	"	4.5	4.8	2.9	-6 +55
Total	"	27.0	26.9	16.6	Small +63
% of "Red Meat"	"	18.6%	18.9%	11.7	—

material it certainly is evident that poultry has "come of age" as a regular main course food.

As these figures indicate, poultry consumption this year and next (on an eviscerated basis) will equal nearly 1 lb. for every 5 lbs. of the so-called "red meats." The estimated 27 lbs. per capita for 1953 is 63 per cent above 1940 and is about 2½ times the present consumption of lamb and veal combined.

Putting these various elements of the outlook together, we come up with the estimates of meat production and consumption shown in Tables 10 and 11. We realize that it is well nigh impossible to foretell all the factors which may influence our meat supply in the year ahead, and we solicit your tolerance as to the final accuracy of these 1953 estimates.

Several of the figures on this page are italicized and I'd like to comment briefly on them. First off, we think there is an excellent chance that 1953 meat production

TABLE 10: ESTIMATED LIVESTOCK SLAUGHTER, MEAT PRODUCTION AND CONSUMPTION, 1953, WITH COMPARISONS

Item	1953 Forecasts**	1952 Estimates*	1951 (Revised)	1953 Change from 1952	1951
Total Slaughter—Mil. Head					
Cattle	21,000	18,500	17,100	+14%	+23%
Calves	10,000	9,200	8,913	+9	+12
Sheep & lambs	13,000	13,300	11,418	-2	+14
Hogs	80,000	84,500	85,581	-5	-7
Total Meat Produced—Mil. Lb.					
Beef	11,000	9,625	8,843	+14	+24
Veal	1,200	1,125	1,061	+7	+13
Lamb & mutton	600	625	522	-3	+15
Pork	10,675	11,200	11,483	-5	-7
Total	23,475	22,575	21,909	+4	+7
Per Capita Consumption—Lbs.					
Beef	69.4	61.8	56.1	+12	+24
Veal	7.5	7.0	6.6	+7	+14
Lamb & mutton	3.7	3.9	3.4	-5	+9
Pork	64.9	69.8	71.6	-7	-9
Total	145.5	142.5	137.7	+2	+6

TABLE 11: TOTAL U.S. MEAT PRODUCTION AND DISTRIBUTION, 1941-53

Year	Total U.S. Meat Pro- duction	Ch. in Stocks Million	Distribution Net Exports Pounds	Armed Forces	Domestic Consumers	U. S. Civilian Popu- lation Million	Civilian Per Capita Consumption Pounds
1941	19,569	(164)	351	448	18,934	132.7	142.7
1945	23,691	216	1,165	3,568	18,742	129.9	144.3
1946	22,934	(198)	870	918	21,344	139.3	153.2
1947	23,338	276	248	672	22,142	143.5	154.3
1948	21,300	(62)	(212)	464	21,110	146.0	144.6
1949	21,462	(40)	(100)	472	21,330	148.4	143.7
1950	22,079	45	(233)	587	21,680	151.1	143.5
1951	21,909	128	(400)	1,269	20,912	151.9	137.7
1952*	22,575	(110)	(290)	975	22,000	154.0	142.5
1953**	23,475	—	(300)	1,000	22,775	156.5	145.5

Source: Based upon published reports of the USDA.

*Preliminary Estimates. **Tentative forecasts of the AMI.

will reach a figure close to 23,500,000,000 lbs., which would be 4 per cent over the present year's output and 7 per cent above that of 1951. This increase, we think, will be entirely in beef and veal, which will more than affect a likely 5 per cent cut in pork production for the calendar year.

The resulting supply of meat per person may reach 145 lbs., as against the current year's consumption of 142 and the 1951 figure of 138. Because of the rapidly increasing population, these gains per person are not as great percentagewise as the likely increases in production.

By classes of meat, it is interesting to note that the estimated beef consumption of 69 lbs. will about equal the relatively high figure reached in 1947. On the other hand, per capita pork consumption of around 65 lbs. would be at the lowest level since 1942. Lamb consumption will continue comparatively small—less than 4 lbs. per person. Veal consumption, although up slightly, will likely continue well below the 10-to-12-lb. level of the mid-40's.

In conclusion, let me summarize briefly the points

which I have tried to make during the past few minutes:

1. There is a good corn crop in prospect, but feed supplies in total will be only a little larger than in the year just past. The 1952-53 utilization of feed grains again probably will exceed the harvested crop.

2. Based upon the preliminary estimate of a 9 per cent cut in the 1952 pig crop, federally inspected hog slaughter in the current marketing year is tentatively estimated at 57,500,000 head, 10 per cent under last year's 63,800,000 head.

3. The unusually large marketings of hogs during February and March, 1952, is not expected to be repeated in 1953. In other words, hog slaughter probably will show a greater reduction in the January-March quarter than in other months of the marketing year.

4. No substantial change in the next year's pig crop is thus far indicated. This could change as the year progresses, of course.

5. Cattle numbers have increased much more than normally would be expected since the low point in the current cattle cycle was reached at the beginning of 1949. We now are at the point where 1953 can see a material increase in slaughter, even with a further large gain in the number of cattle on farms and ranches during the year.

6. Purchases of feeder cattle are running well ahead of last year, and with a favorable corn crop, the total number of cattle fed this winter is expected to be larger than a year ago.

7. Supplies of processing beef are expected to be larger next year, with further increases likely in 1954 and 1955.

8. The sheep population will not increase as much this year as last, because of the forced marketings from much of the major sheep areas.

9. A further small gain in poultry supplies is expected in 1953. Poultry consumption now equals nearly 1 lb. for every 5 lbs. of "red meat" consumed.

10. Production of meat in 1953 is tentatively estimated at 23,500,000,000 lbs., up 4 per cent from 1952 and 7 per cent over 1951. This will permit a consumption of about 145 lbs. per person, compared with 142 lbs. this year and 138 lbs. last year.

LEFT: Fred Engelhorn, Gene Sollars, Nick Vonzell and John Deutsch, all of John Engelhorn & Sons, Newark, N.J.

CENTER: G. W. Gible, secretary-treasurer, Palmyra Bologna Co., Palmyra, Pa.; John Kessler, president and Robert Kessler, plant supervisor, both of Kessler's Inc., Lemoyne, Pa., and Harry M. Sellers, plant superintendent, Palmyra Bologna Co.

RIGHT: Bill Fredricks, Dick Weinman, Jack Cline, art director, and Jack Pritchett, plastics division, all of Transparent Package Co., Chicago.



American Housewife is Packer's Boss



RINDLAUB

HELLO, ALL YOU nice meat men! This reminds me of the small boy in my home town who came home from school on his first day with the announcement: "I'm not going back to that place any more." "Why not, Johnny," someone asked him. "Well," he said, "I can't read! And I can't write! And they won't let me talk."

My own personal opinion about meat is only too obvious. I think it's a fine thing! I share completely the point of view of little Ellsworth in the comic strip. He asked his mother for more meat.

"Not until you eat your vegetables," said she. "More meat," he insisted. "Vegetables first." Ellsworth was deeply unhappy. "But maybe they'd fill me up so I won't have room for more meat. I don't wanna eat vegetables for nuttin'." That's my opinion, too. Any meal that doesn't include meat in some form is just eating vegetables for nuttin'!

I hear that various people on your program have been making the point that the meat industry is a little behind the trend. I want to talk about that, too. For I see by the papers that it's a changing world. Great social changes have been taking place in America—changes affecting the living habits, the buying habits and even the eating habits of millions of Americans.

I think that here and there a lot of people are beginning to recognize that it's a changing world and they are making something of it. Why are more stores staying open in the evening? Why are more products sold in quick, convenient packages? Why is there a tremendous market for ready-cooked, ready-mades, ready-cuts, ready-packaged? Why are suburban shopping centers replacing city markets? It's in recognition of your customer's changing world.

What is changing your customer's world? Motion, for one thing. Americans are on the march. Mother stayed put. Daughter gets around. 141,000,000 families have moved, bag and baggage, since 1940. That's four moves to a family.

People who haven't changed their homes or their eating habits in generations are picking up and packing off to new jobs, new responsibilities, new opportunities in other communities. Half a million families live in trailers—that's a changing world. 900,000 service families are

certainly moving up and down and all over the place.

A boy named David came to see me recently. David grew up on a Pennsylvania farm. So did his father. So did his grandfather. But David has seen the Coliseum. He has been in Monte Carlo. He shared Christmas dinner with a friendly family in Switzerland. He compared notes with another young sailor on my front porch on just where the street car ducks under the mountain in Genoa.

David is out of the Navy now. He owns a new Olds. He has started college on the G.I. Bill; plans to be an engineer. Mysterious words like radar and paravane are duck soup to David. He is part and parcel of the new America.

And so are his father and his mother. All those weeks and months of tracing unfamiliar places on the map, the air mail letters, the pictures—these things have become a part of the life and the lore of the family.

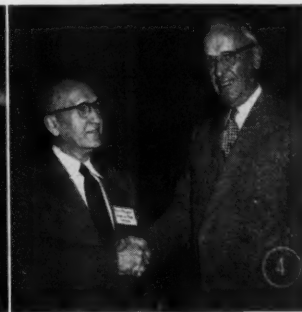
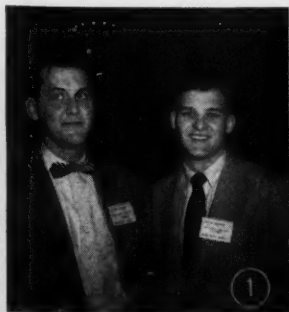
There have been 16,300,000 Davids in the last ten years. Sixteen million boys and girls have lived in a wide world and taken their families at least a part of the way with them. That's changing living habits, buying habits, eating habits.

We had leg of lamb for Sunday dinner. "This is something we never had at home," said David. "But it's one meat I've learned to like now." One of many. The world is changing for David. It will never be quite the same place again. He's mature—you don't have to be afraid to talk sense to David.

And I think you have found in your own Institute advertising that sometimes it's remarkably effective to talk sense to David's mother. Your customer is growing up. Wanna make something of it? And your customer is getting married—marrying oftener, marrying a good bit earlier.

One in three of the 17- to 19-year-olds are married right this minute. You could make something of it. You might, you know. You might want to bring your boy talk and

1. Arthur Chermak, secretary, and Merlyn Hoefner, foreman, both of Cher-Make Sausage Co., Manitowoc, Wis.
2. Harold Stone, manager, hog buying department, Rath Packing Co., Waterloo, Iowa; J. R. Pickard, general manager, Livestock Conservation, Inc., Chicago, and R. G. Plager, general manager, agricultural service department, John Morrell & Co., Ottumwa.
3. Eugene Derba, president, Western Beef Co., Boston; B. Miller, vice president, Boston Sausage & Provision Co., Boston, and Jason B. Sabean, vice president, John E. Smith's Sons Co., Buffalo.
4. Merrill Maughan, American Meat Institute, and R. C. Pollock, general manager, National Live Stock and Meat Board, both of Chicago.





1. Curt Schirmer, superintendent, and Sam Freed, sales manager, both of Grand Taste Packing Co., Los Angeles.
2. Jack Vibbert and Harry Vibbert, both of Vibbert & Sons, Detroit.
3. Fred Bauer, salesman, and Bob Petz, accountant, Peters Sausage Co., Detroit.
4. John Zeigler, general manager, Stark, Wetzel & Co., Frankfort, Ind., and C. W. Riley, jr., provision broker, Cincinnati.

your new cook talk and your homemaker talk down to teen-age level—for it's the teens you're talking to.

They're having more children—the birthrate is high. You could make something of it. There are more younger women, six in every ten in that age you like best—the buying 20's and 40's. And there are more older women—and more active older women. They have learned to live longer and like it. You could make something of it.

These are just a few things—I wish there were time to tell you more. But this you can be very sure—it's a changing world.

Modern living is fluid. People are traveling more, getting around. Modern living is youthful—more babies, more young brides, more young mothers, more young grandmothers. Modern living is practical—two-job wives, community responsibilities, women in politics. Modern living is alert to books, music, news events.

Modern living is casual living—easy, effortless entertaining, uncomplicated food and clothes, time saving approaches to everything from cosmetics to cooking. Homes are built and furnished more simply to reflect the lives of the families who live in them.

Home freezers, bigger refrigerators, the habit of weekly marketing—these things are important in your customer's changing world.

Nineteen million women have full time outside jobs today—one third of the total female population. There are more working wives, more working mothers, than at any time in history. They need your help.

What's happening to their meat-eating habits? Well, I've been asking different groups of women. I asked 127 big city women, career women. I asked a group of several hundred women in Onondaga County, representing smaller towns. And I asked a group of negro housewives. The questions were the same. The answers didn't vary much.

How many times have you eaten meat in the past three days? Four times, said the women in the big town. Three

to five, said the women in the small town. Five times, said most of the negro housewives, confirming a small opinion we have had that this particular group knows and eats good food.

At which meals do you eat meat? Every one of our career group eats meat for dinner. Most of our small town and negro groups do, too. About half the families eat meat for lunch. A few hungry souls still eat meat for breakfast, although that's the figure that's going down in your customer's changing world.

What do you like best for breakfast? You know that one. Bacon. Scattered votes for sausage and ham, high in the negro group. What do you like best for lunch? This one surprised me, although you probably know it, too. Cold cuts, cold cuts, cold cuts. Nobody has time to cook at noon.

What do you like best for dinner? Steak won in the New York group, roast beef almost as high, then a big drop down to pork and lamb chops, with ham coming up. In the small towns, beef is on top, with a little leaning to roast beef rather than steak. In the negro group, chicken ties beef for first place.

Do you think you are eating more or less meat than five years ago? About the same, say two-thirds of our big city group; less say one-third. Bigger families in the smaller cities are eating more. Negro groups say they're eating about the same.

The "mores" explain things like, "There's a man in the house," "Fed up with lack of meat in college," "Husband eats more since he's returned from service." This changing world again. "I'm on a protein diet"—that came up pretty often. "Because we can afford it, and it's better for us." "We have a home freezer now."

The "lesses"—and there are a good many of them—explain it very simply. Too expensive in the big city groups, too expensive in the small towns, too expensive for the negro groups. "We'd eat more if we could afford it." What are they substituting? Fish, cheese, eggs, vegetables, salads, macaroni. Macaroni is on top with one small town group, eggs with another, eggs and fish in the negro group.

What's your favorite economy meat, we asked. You know that too. Hamburgers. Way out in front. So far there isn't any catching up. A few votes for frankfurters, meat loaf, chuck and chops.

The New Yorkers are working women. They haven't

much time. So it isn't surprising that the meats they cook most often are steak, hamburger, chops and chicken. The small town women stay home. Hamburger tops their list, next comes pot roast, roast beef and chicken. They have time to cook the slow things. Roast beef, meat loaf, chicken top the list for big families with hamburgers a runner-up. Chicken runs away with the negro vote, with hamburgers coming up.

What do you serve for company? Here, there are differences. Beef, chicken, steak in New York. Chicken, roast beef, and ham in the smaller towns. The negro groups serve chicken. Big families vote first for roast beef and then comes chicken.

Where do you buy your meats? At the good old butcher shop, said a lot of city people. But the supermarket has taken over across the country and in the negro groups.

How do you buy it? Cut to order was very high on our big city list. But prepackaged is coming up strong.

How much do recipes matter when you're cooking meat? Well, out of 165 New York families, 76 say they "just cook." Thirty-nine use cookbook recipes, 34 use family recipes, 12 use magazine recipes. What about the small towns? Here, too, "just cook" say the majority, next come family recipes, magazines and cookbooks are about on a par, almost up to "just cook."

I thought it would be fun to find out whether they do know anything about these nutrition facts you've been feeding them. What do you think proteins are, I asked. The answers varied all over the map. But they were amazingly accurate and they made proteins sound like very good things, indeed.

You will be interested to know that the general understanding of proteins is just as high in the small towns and just as high with the negro group. Do you think you need proteins every day, I asked. Yes, they said, almost to a woman. And that didn't vary group from group either. Do you think there are more proteins in higher priced meats than in lower priced meats? No, they said, pretty unanimously too.

That speaks well for the job you are doing. I asked about amino-acids. And I got answers that amazed me. It's a changing world—daughter knows a lot of things her mother never knew. They like amino acids, too.

I asked, who do you think needs the most meat in his diet? And every single group put the man who does hard

manual labor tops. So Pops is tops—better remember that when you're writing your ads.

I don't need to tell you, of all people, that they're eating more meat in this changing world. I remember years ago being in Washington at President Roosevelt's first and famous nutrition conference. One by one, well-known nutrition authorities got to their feet and bemoaned "The American family is undernourished." "The American family is under-educated." "If only we could get people to eat more meat, fruit, vegetables, eggs, cereals."

That was at the depth of the depression. So what happened. Along came war and with it prosperity. The American people had money in their pockets. So what did they do? They didn't wait for education. They lit right out for the corner store and bought more meat, fruit, vegetables, eggs and cereals.

The relationship between meat and money in this country is now so thoroughly established, it can't be a coincidence. In fact, there have been times in the past few years that it looked as though many families would rather have meat than money. As income goes up in low income families, they waste no time in putting that income right where they want it, into good red meat.

So it seems to me the best solution of any problems of this backward meat industry might just be to keep a weather eye on Washington and be sure that everybody in America has money. It's as simple as that!

If it's true, as the Meridith survey indicates, that families with incomes of \$4,000 eat twice as many steaks and roasts as the families with incomes of \$1,000, then all the steak and roast beef people have to do is just to see that we have enough families at the \$4,000 level. I wish you'd do one thing more for my private curiosity. Find out where those \$1,000 families get ANY steaks and roasts.

I saw a cartoon the other day picturing a little girl at a perfume counter. She looked at the labels—Cobra, Dynamite, Passion's Night. Then she asked, "Do you have something for beginners?" I know I'm not talking to beginners. I don't have to tell you about meat. I want to tell you what women themselves think they'd like their meat man to do.

I know you don't sell at retail. But the retailer is your customer. So for the next few moments won't you pretend you are a retailer? Why? Because the things we are going to talk about are things you may want to tell your customer, the meat retailer. I hope you'll tell him. I hope the word will get around.

For the rest of my 25 minutes I'm going to tell you what the boss wants. For, make no mistake about it, whether you meet her on the retail or the wholesale or the manufacturing level, she's the boss, the little woman who buys the groceries. She's the difference between you in the black and you in the red. And she has ideas, red hot ideas, about what she wants from her meat man.

She wants you to be helpful. Put recipe leaflets right on the package. New seasoning tricks for hamburgers, new stew recipes for stew meat, things like that. She wants explanations of different cuts, what they are, how they should be cooked. She thinks you haven't given her nearly enough help with lower priced meats. She'd use more of them if she knew how. She wants you to tell her how much meat she'll need for how many people. She wants you to know and tell her how long to cook each



SAUSAGE in natural casings again played a large part in promotional activities of the AMI sausage committee. This attractive display was set up in the exhibit hall.

Old timers add a touch of nostalgia to the convention as they are honored for their many years of service.



In center photo are veterans George Peterson, Thomas E. Wilson, chairman of the board, and Wade Scruggs, all of Wilson & Co., Inc., Chicago.



cut. She wants you to explain how to tell a good steak, "I always forget whether you ought to be glad for little steaks or beware of them," wailed one woman. Remember . . . these are all your customers talking.

When she's a two-job wife—she wants you to save her time. When she pops in at five, she'd like a special display of quick and easy-to-cook meats. Not roasts or stews, just things of the hurry-up and get-over kind. She wants a ticket system to give her a fair turn in the line. She wants special services. She'd like stores to place the meat counter near the check out counter so she doesn't have to drag her meat around out of the refrigerator while she does the rest of her shopping.

She'd like you to do more recommending of out-of-the-ordinary cuts and varieties. She wants you to cut your chops and steaks thick—or at least, to cut them uniform so they'll all be cooked at once. She'd like you to crack the bones of the T-bone steaks. She thinks you should spot a bride a mile away and go out of your way to tell her things about cuts and cooking. She's economical. She'd like a "Best Buy of the Week" display. She wants you to give her more meat, less bone and fat. She wants you to remind her that meat prices are dropping by signs that say "Down from — last September to 89c a pound today." She wants you to sell her a pound when she asks for it, and not a pound and 15 oz. She's curious. She'd like to see the meat you're selling her before you mangle it in the chopper.

She'd like you better if you wouldn't put so much fat in your hamburger; cut your chops so many different thicknesses; mark the prices on your packaged meat with such a faint pencil; plop her choice cut of meat on the old chopping block gory with the remains of yesterday; forget to include the giblets with your chickens.

She'd like you better if you would take time to remember her name. Tell her how nice she looks today (I'm not making it up; women say things like that). Warn her that a certain cut of meat is very high this week, instead of just weighing it out and horrifying her with the price.

Tell her in advance about your weekend specials so she can plan ahead. Sympathize with her about prices. She wants someone to understand. Take her on a conducted tour through the refrigerator some day and let her watch you grind round steak. Throw in an extra, even just a little extra, once in a while. Have something else to offer when her original item turns out to be too expensive instead of just glaring at her. Install linoleum and forget about sawdust. Sawdust may have atmosphere,

but it gets on suede shoes. Date your packaged meats.

Tell her what months to stock up the freezer—a long range forecast. October for pork, December for beef—things like that. Cut up chickens into separate legs and second joints and two breast pieces so she gets better frying size pieces.

Give her a really good cut that time she has somebody special and needs it. Don't handle money or blow your nose when you're touching her meat. Offer a choice—show two steaks at different prices, explain the difference, two chickens of different sizes. Be a salesman instead of an order taker. Butcher, butcher, don't you know that women want to shop for meat—not to take the first thing you show. Women like to shop.

Have some cheerful music playing on the radio—it's depressing to buy meat. Keep yourself neat and clean. You may start out that way, but your apron gets dirty much too soon.

And this one I kind of like, because it keeps popping up: "Just a friendly smile would suit me."

If she asks for top sirloin and you haven't got a good top sirloin, we'd like you to explain that you do have some good bottom round and tell her how to cook it. Put up signs when you're out of certain meats—No lamb today but a good buy on chickens.

Of course, we got some funny ones, or maybe just pathetic. One little optimist says, "I wish my meat man would just bring prices back to his good old levels." And I know a lot of women wish you'd go back to the good old days. Well, you see what it adds up to: Help me know top round from eye round; help me know which cut to buy; help me know how long to cook it. "I've been buying nine years but I still don't know anything," says one woman, "and my butcher's just no help."

So now you know. The boss needs you. She needs your customer, the butcher. Needs you to help her to be a better housewife, be a better mother, be a better homemaker. She needs you to help her translate her dollars thoughtfully into blood and bone and sinew, into healthy, happy smiles, into rich good living. The boss is busy.

She needs you to help her get quick nourishing meals. She needs signs, needs displays, needs to know somebody cares. The boss is lazy. She wants you to tell her how to do it quick and easy. The boss is friendly. She'd like to entertain more if you could show her how to do it on her budget and her time schedule. The boss is practical—she wants you to give her good reasons for buying the things you have to sell.

The boss is forgetful. She needs you to remind her of

meats she's forgotten. The boss is fussy—she expects to take good care of meat when she gets it home, she wants it to look well cared for in your store.

It isn't too much to ask. And women are asking. We did a survey one time on what women like and dislike most in food stores. We got thousands of replies. And one in three had to do with just one thing, courtesy.

The boss wants to be loved. I go around saying this and it's true. She does not want to be growled at, or snarled at, or yelled at, or sneered at, or peered at suspiciously as though she's just about to put a package in her pocket. She wants men to know her name and use it. She wants stores to stay open late. She wants people to smile. It's a big, terrifying, nasty, horrible, mean old world.

I remember walking on Park ave. one day with my small daughter. "I like little dogs," she said thoughtfully. "But I don't like the ladies who own the little dogs." "When you smile at their little dogs, they don't smile back."

That's how the boss feels. Your customers don't smile back. Anything you can do to make them warm their stores up, to put in friendly signs, to have neighborly extra services—these are things that make a hit with the boss.

And when the boss is happy, then your customers make more money. And when your customers make more money, life goes looking up for you.

I heard Joe Louis quoted the other day, "It's not that I like money so much," he said, "It's just that it calms my nerves." Might it not calm your nerves to encourage your customers to give their customers just a little bit of that nice old thing called love?

Why Not Make Packing Profitable?



ZEUCH

EVERYONE, IN the early days of this country, was a meat packer. If he was not a hunter, he raised a pig or a cow, or he managed to trade something for one in the fall of the year. He butchered it and salted it away for use during the winter months. Our country grew very fast, especially after the American Revolution, when the Ohio Valley was opened to new settlers.

Cincinnati became the meat packing center of the country in 1818. As the railroads were built, packing-houses were constructed at strategic shipping points. The first large stockyard was set up in Chicago in 1865.

As population grew wholesale grocers played an important part in advancing credit and establishing independent retail merchants to supply the needs of the people. They sold everything from lumber, nails, tools and barrels of whiskey to clothing and food. The meat packers and the wholesale grocers supplied the early general stores and later the independent retailers with credit and with most of their wants.

Just prior to World War I the large independent wholesale grocers became too independent—too self-satisfied

and complacent. As a result, after the war the chain grocery stores that had been quietly making some headway really blossomed out and spread like wildfire all over our country. The wholesale grocer had not made any appreciable change in his method of operation in 50 years.

At this time approximately 50 per cent of the consumer's dollar went for operating costs and profits; that is, the gross margin of the average independent wholesale grocer was 18 per cent, and the gross margin of the average independent retailer was 32 per cent.

In 1932 the chain grocery stores had become very efficient, performed all of the functions of the wholesaler and retailer combined, and operated on a gross margin of 25 per cent. Little wonder that they grew and flourished.

But a disastrous depression hit our country at this time, and it became necessary to find new, better, more efficient, more economical ways of distributing food.

We all know what the supermarket accomplished. In 1932 the average weekly volume of the average chain store was about \$1,000. Today the average weekly volume of supermarkets is approximately \$17,000, with many supermarket chains having many stores doing \$30,000 and \$40,000 per week and up. This volume did not come to the supermarket by accident.

Supermarkets very substantially undersold the chains and the independents. They were able to do so because their efficiency was far greater, their operating costs substantially lower. As William Applebaum of Stop & Shop, Inc., Boston, stated in an address before the American Marketing Association in Boston early this year: "Everyone will agree that during the past two decades the supermarket method of distribution has achieved the most spectacular progress in retailing efficiency."

The average supermarket of ten years ago had 6,000 to 7,000 sq. ft. of selling space and had an average weekly volume of about \$7,000. The average supermarket today has about 10,000 sq. ft. of selling space and an average weekly volume of about \$17,000. Therefore, in the past decade the selling area has increased by about 50 per cent, while the dollar volume has increased about 150 per cent.

I am giving you average figures. There are many large supermarkets today running as high as 30,000 sq. ft., with volumes in excess of \$100,000 per week.

The trend over the past two decades has been to larger and larger stores, with ample parking facilities, and with an ever greater selection of merchandise, and new and varied departments. The housewife today really wants to make a minimum number of stops in her shopping. Hence, the popularity and success of the new modern shopping centers.

The meat department of the early chain food store was usually leased to a local individual butcher. It was not a particularly important department. It operated on a gross margin of about 30 per cent. In fact, it usually coasted along and lived on the traffic in the store. Rarely did it create any.

The supermarket realized early the importance of meats and the other perishables. In 1932 the average chain stores' meat volume was only approximately \$200 per week. The supermarkets built volume in their meat departments to about \$2,500 per week in 1942. Today it



PHOTOS ON THREE PAGES show five of the 12 panels displayed during the AMI convention to illustrate the scope and development of Meat Educational Program advertising from 1940 to 1952. The ads showed how the campaign has been adapted to employ new nutritional knowledge, meat wartime conditions and to show the housewife how to stretch her meat dollar.

is about \$4,500 per week, or about 26½ per cent of the total sales of the store.

There is no doubt that the impact of the supermarket on meat retailing has been earth-shaking. In 1929 there were 49,865 meat and seafood markets. By 1948 the number had decreased to 29,465.

On the other hand, the number of grocery stores with fresh meat increased from 115,549 in 1929 to 223,662 in 1948. Thus, there has been evidence of a growing consolidation of meat sale with that of other departments in an outlet which carries all foods. The supermarket has been the prime mover in this trend.

In 1929, from a few stores which you could count on your fingers, the number soared to 15,383 supermarkets at the end of 1951, with a total of \$12,300,000,000 in annual sales. It is apparent that the supermarket has been the most important development changing the pattern of meat sales.



MEAT IN WARTIME . . . AND WHERE IT WENT

An exact comparison of sales is difficult. Some supermarkets run dairy products through their grocery departments; some run them through meats. Some bakery departments are separate. Some are included in grocery sales. Some have large delicatessen departments that are separate. Others run all their delicatessen items through their meat departments.

The aggressive and successful supermarket of today believes in featuring and selling meats and other perishables. We believe that the housewife decides first on the meat item for each meal, and then makes her other purchases to balance the meal. We believe that if you get the meat business of your customers, you will get the rest of their business.

We believe that there will be a continued shift to larger and larger stores with an ever-increasing selection of items. Where is the saturation point? Profits depend on turnover. A large store does not necessarily mean it will



WAR SHORTAGES EXPLAINED . . . AMINOS EMPHASIZED

do a large volume. If a store serves its customers better than competition, it will get volume and turnover.

The big drive today with every supermarket organization is for traffic—to bring people into their stores. Generally, today at store openings merchandise is not sold at ridiculous prices to bring traffic. True, they offer good values, but generally they have all kinds of gimmicks to produce traffic. At Grand Union's opening of their East Paterson, N. J., store last April they had a circus, plus all kinds of give-aways.

To digress for just a moment from the supermarket industry as a whole let me talk briefly about Century. We have given away automobiles, TV sets, refrigerators, stoves, all expense trips to New York, free groceries for a year and many other things. No purchases were necessary. All the individual had to do was to come in and sign a slip of paper with his or her name and address and deposit it in a box for a future drawing. Now if our setting was right, the person would buy. We would get volume, turnover and profit.

Our new stores—and we have built quite a few in the past two years—have the following features: Terraza

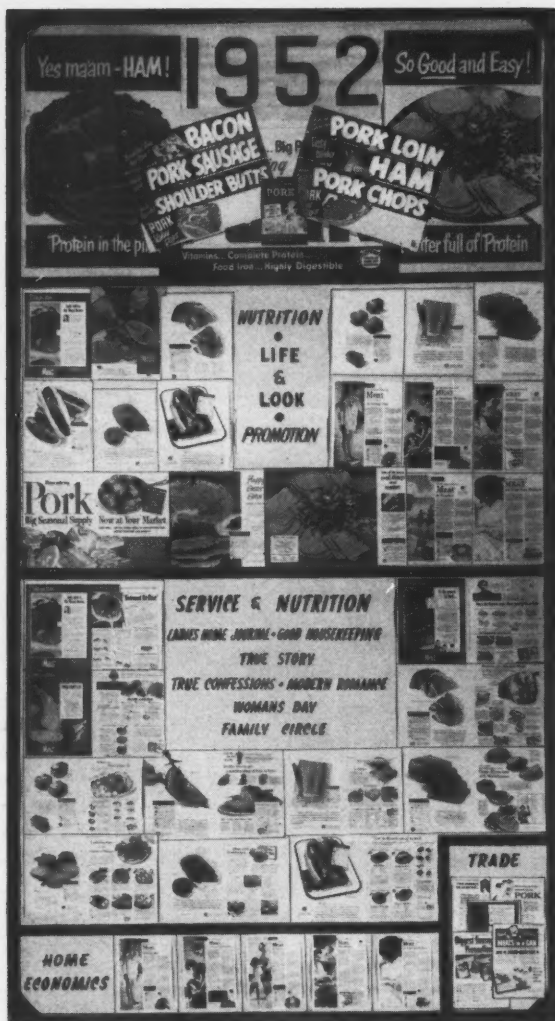


NUTRITION VALUE . . . AND HOW TO ECONOMIZE

floor; streamlined fluorescent lighting; air conditioning; new, improved fixtures for drugs and sundries; new, improved bakery; candy; magazines, and kitchen equipment fixtures—all on a self-service basis. Our new stores also have very large meat departments with at least 100 ft. of self-service counters, a large dairy department, a large frozen food department and a large, separate ice cream department.

We have plenty of back-room space for storage, plenty of refrigerators, new and improved check-out counters, murals on the walls over the meat department, with the other walls painted in soft pastel shades. Most all new supermarkets are attractive, fine stores. They have to be to get business!

In addition to all of the above features, the most important part of our program to get volume, turnover and profits is the merchandise we sell. We feature, practically exclusively, the well-known, advertised brands. We like



MEAT ADVERTISING OF TODAY

to sell brands that our customers know and know they can depend on. In our meat department we feature four or five of the national packers and well-known local packers.

We want to continue to use our meat departments as traffic builders, but we, like everyone else, are having a serious problem in making money in meat.

A manufacturer, or producer, to be strong and remain strong, requires distributors who are financially strong and whose operations are profitable.

Part of our problem this past year was caused by the federal government, both directly and indirectly. Directly by OPS, and indirectly by the artificial controls and manipulations of OPS, the Department of Agriculture and other federal agencies in regulating and harassing you.

Another deterrent to profits is competition. Many organizations, little and big, but particularly two of the largest national chains, have been using their entire meat operation as a loss leader for their whole store. They feel that they can lose money in their meat department and create traffic for themselves by substantially underselling competition.

By increasing total store sales, and making profit on other departments, they feel they will average out all right. A situation of this kind is bad not only for retailers of meats generally but eventually it will hurt the meat packers as well.

To get back to the industry as a whole, one of the first effects of the supermarkets was to attract women, by millions, to the supermarket as the first place to shop. Today, a minimum of 35,000,000 families can be reached directly through roughly 16,000 supermarket outlets in the country.

It is apparent that the supermarket, by virtue of the better values it offers to the consumer, has won the approval of the American woman shopper.

What did the entrance of the supermarket into meat retailing mean to the average customer? It meant what it has always meant for food distribution in general, a forward step in lowering costs of marketing. The supermarket, by virtue of the vast traffic it enjoys, averaging between 7,000 and 8,000 shoppers a week, has been able to buy in mass volume and to take smaller returns per unit sale.

There are supermarkets today whose meat gross margin is as low as their grocery margin, which is 14.6 per cent, and lower. The supermarket, therefore, has demonstrably produced a lower retailing cost for meats. This is one clue to why women prefer the supermarket for their meat purchases, and why the meat packing industry as well as the cattle raising industry, owes a debt to the supermarket.

It has taken meat retailing out of the traditional selling pattern into a mass retailing pattern which implements the mass production pattern of the packing plants. In its efforts to serve the consumer more adequately, and to gain increasing volume, the supermarket introduced self-service into meats. As a matter of fact, self-service meat retailing is almost entirely confined to the supermarket.

The supermarket operator was willing to step out of his role as a meat retailer into processing, in order to gain the advantages of self-service. He has actually assumed some of the functions of the packer since he now wraps and prices his own meats in a back room operation. Often he utilizes conveyor belt lines and packaging machinery. From self-service he has gained better control, greater sales volume and better service to the customers.

Thus, a recent survey by Du Pont reveals that shoppers bought 9 per cent more meat items and shopped in 41 per cent less time in self-service meat departments than in service meat departments.

Women now have been educated to buy packaged meats, and it remains yet for the packers to develop methods for handling this themselves. The supermarkets are at an impasse. They have gained what is practically the ultimate in selling of prepackaged meats. Today, meat processing and packaging are almost entirely back room operations, carried on in individual stores. There is only so much that they can do with this kind of operation. It is not possible, unless the volume is vast, to gain much from the introduction of packaging machinery, for example.

It is, therefore, a hand operation in most markets, with all the high labor costs usually attendant on any small packaging operation. Operators have eyed central prepackaging as the way to gain the advantages of mass

production. They have penetrated successfully into this field of endeavor with cheese and luncheon meats, since these have a longer keeping time. Central prepackaging of fresh meats is believed practically impossible because fresh meat, as handled today, just can't be controlled.

That is why very few have engaged in this activity. However, the operator is not going to sit by and admit defeat. He hasn't so far. He has already found the medium which will deliver him, and that is frozen meats.

Operators today, privately and publicly, admit that the only way to gain the advantages of self-service and centralized prepackaging is through frozen meats. Here and there operators are experimenting with self-service frozen meats. It will take the entrance of only a few major chains into this field before others join in.

So far I have sketched the major changes which the supermarket has made and toward which it is veering. The drive is toward getting greater consumption of meats at cheaper prices, and the supermarkets have been the spearhead of this drive.

Now, out of these major developments several problems arise, which meat packers must help our industry solve.

One of the biggest hindrances to the development of mass retailing of meats has been the fact that there was never enough meat for the population. Even though it is true that over the years the output of meat has continuously increased, and that the per capita rate of meat consumption doesn't seem to have varied very much, it is still true that the average consumer is capable of eating much more meat, and the average supermarket is equipped to sell much more meat. Meat shortages have continually somewhat hampered the ability of the supermarket.

According to N. L. Chaplicki, vice president, National Tea Co., in an address last year before the National Association of Food Chains: "Human population is out-running livestock population. Since 1900 the number of people in the United States has a little more than doubled, whereas cattle numbers have increased only 41 per cent; hog numbers are up only 27 per cent, and sheep numbers are down 38 per cent."

The American Meat Institute points out that by 1960 we have to increase meat production by 3,000,000 lbs. if we are to keep up an annual per capita consumption rate of around 146 lbs.

Studies of consumer habits show that they are capable of eating much more than 146 lbs. a year. The Department of Agriculture estimates that 170 lbs. per year per person could readily be consumed. In that case, we would have to increase our meat production by 6,600,000,000 lbs., or 30 per cent higher than the 1950 rate. As a matter of fact, F. W. Specht, president of Armour and Company, addressing the American Meat Institute on September 4, 1947, visualized: "I propose that our industry work toward a goal of 175 lbs. of meat per capita in 1955. I realize that many things can happen in the intervening years to change our picture. I still believe, however, that it is well within the realm of possibility to put 700 lbs. of meat in Mrs. Tomorrow's market basket for her family of four."

I submit that we have only three more years to obtain this. I submit that our industry is more than eager to get that kind of supply. We are geared for mass selling.

I should like to say further that this idea of 175 lbs. per capita is not simply a conjecture. The OPA, in 1944 made a survey which showed that in the state of New York, people were eating meat at a rate of 170 lbs. per person in a typical close-to-normal period.

What is more, in the metropolitan area for New York city alone the per capita consumption was 200 lbs. In San Francisco and Spokane it was 246 lbs. The same survey shows that in Massachusetts consumers ate meat at a per capita rate of 171 lbs. compared to the national rate of about 149 lbs. It is probable, therefore, that per capita meat consumption can easily go up to 200 lbs. and higher.

Through self-service display in our supermarkets you have a better opportunity to sell more meat because we display more meat. Whereas there would be a handful of products in a service case, self-service makes it possible to display well over 100 items at any one time.

This raises a second problem. In order to sell more meat we will have to sell more of the carcass. We now display many more cuts of meat than customers are accustomed to see under service. We even sell prepackaged chicken feet, suet, bones, etc. However, we do not find that the American housewife, particularly the young homemaker, is sufficiently aware of the advantages of buying other cuts than steaks, roasts and other broiling meats.

We need some kind of educational campaign which will sell Mrs. America on the advantage of using other types of meat cuts that are served, for example, so palatably by our European cousins. Perhaps we have to encourage the use of recipes taken from the notebooks of some of our famous hotel chefs throughout the country, to push sales of the so-called lower-priced cuts. To many women, being out of steaks is to be out of meat.

During the war there was a lot of education on the use of cheaper cuts of meats. It was successful to a considerable degree. There is no reason why we cannot continue to encourage this. Some have made tentative efforts to include recipes in the package with certain meat cuts.

I would play up the tasty, appetizing qualities which can be obtained with certain meat recipes and soft pedal talk about the nutritional aspects. Nutrition is no substitute for taste, and the average family is more concerned about taste than whether it's healthy.

If there were greater acceptance of all cuts of meat, the great disproportion between low-priced cuts and high-priced cuts would be equalized. We are not raising cattle just to sell beef steaks, and there is no reason why we have to have a surplus of certain cuts simply because women do not know how to utilize cheaper cuts to their benefit. It is obvious that this proportion, if leveled out, would reduce waste and revert to the consumer in the form of added savings and added consumption of meat.

More consumer advertising is another way to approach our problem. It is important also for our suppliers to take their cues from some of our grocery manufacturers, in glamorizing and selling more of their products, within the retail store. We are all aware that as we convert to self-service, we have removed the personal relationship between the butchers and the customers.

In many markets there is nothing but a barren, anti-septic looking line of meat cuts on display. Unfortunately,

refrigeration has not advanced to the stage where it can get the same kind of mass effects obtainable in the grocery department. But there should be more in-store help from the packers which can push sales. I think, for example, of ham demonstrations by some packers which have done a lot to increase sales of hams. We think more should be done to send demonstrators around into the markets, as a direct contact between the packer and consumer, to increase meat sales.

In the 50 years from 1890 to 1940 the retailing of meat changed very little. Since 1940, and particularly since 1946, meat retailing has changed substantially. In this period self-service, packaged fresh meat, as well as smoked meats, luncheon meats, fish and poultry, has become exceedingly popular. The retailer likes it because it eases out his production and selling peaks. The housewife likes it because she can select her own merchandise in less time than by the old-fashioned service method. They both like it too because it is more economical.

This gives us a very brief review of food and meat distribution up to the present. Now, what will the trend be from here on? Will the meat packers be so hide-bound by tradition that they will continue to operate for the next 50 years as they have for the past 50?

In a recent article in *Fortune*, the writer stated: "The processes of a meat packing plant are only minutely different from those used by any other packer. Some packinghouses are better arranged than others, but the basic equipment is the same everywhere. Indeed, the whole industry was apparently so mesmerized at being able to process 'everything except the squeal', that it hasn't changed its fundamental methods for half a century."

To me this is a very sad state of affairs. Aside from a real plan to develop a packaged frozen meat program, I am not suggesting that tremendous improvements could be made in operating a packing plant. But I am suggesting that tremendous improvements could be made in the packaging, merchandising, selling and the distributing end of your business.

The railroad industry was certainly in trouble in the thirties. Railroadings had not changed much in the previous 50 years. Then came streamlining—not just of locomotives and passenger trains, but of operations as well. Let me quote from a Chicago, Milwaukee, St. Paul and Pacific Railway Co. ad in *Nation's Business* magazine of September, 1952: "Up-to-date, automatically operated yards are essential to the expeditious handling of the nation's freight traffic. For example, in our Air Line Yard in Milwaukee, Wis., current improvements include a gravity-retarder system for faster sorting of cars, 'talk back' loud speakers, teletype for transmitting information, pneumatic tubes for handling waybills, magnetic tape recording of train data, flood lighting and radio dispatching of engines. The net result will be a doubling of the yards' car handling capacity."

For a railroad that went into receivership I don't know how many times, and did not make money even when other railroads did, it seems to me they broke with tradition and found ways and means of increasing productivity and efficiency and of better serving the public. Operating at a profit is the result.

I don't want to be like the proverbial wife sitting in the back seat constantly telling her husband how to drive the family car. As most husbands do, one particular husband finally became irritated and decided the best

thing to do was to teach his wife to drive. She became an excellent driver, but one day on the highway a sudden emergency arose and she said: "Dear, what should I do?" He responded: "Quick—get in the back seat and you will know exactly what to do."

I certainly did not come here to offend you nor to tell you how to run your business. If I can stimulate your thinking, if I can provoke you into trying something new and different, I think we will both benefit.

Huge sums have been and are being spent by you meat packers in your research departments on new items and to find new uses of old products that have been replaced by other industries' new products. But are you spending enough on marketing research, on new packaging, on new selling or distributing methods?

Are you experimenting enough with frozen meats—cooked frozen meats—on products that would make up a complete frozen food menu from soups to desserts?

One meat packer, about 22 years ago, had a splendid marketing plan whereby the packer became the chief source of supply of a retailer. The retailer was to spend his efforts in merchandising and selling instead of on the buying end. Many economies were effected because of this arrangement. That far-seeing packer was many years ahead of the times. The retailer was not ready for a plan of this kind in 1930, but we did not have supermarkets in those days.

I think many packers could interest many supermarket chains today in a plan where they could join together—the packer could produce and process, and the supermarket chain could supply the consumer—with substantial savings all around.

May I ask a few questions that if and when answered would tell us something about future trends?

Are you watching your manufactured items closely enough? Is your quality control working? Are you making products the finest you know how, or are you making them to sell at a competitive price? Are you really profit-minded? Haven't you trained us retailers to bargain and trade with you? Aren't your selling expenses entirely too costly for 40 per cent of the number of orders your salesmen take?

Why should you bother with so many small C.O.D. orders? Isn't it an economic waste to have a ten-ton truck back up to a store to deliver a 100-lb. order? Why don't you inaugurate a control system that would permit you to sell only the meat you can deliver?

I am heartily in favor of your increasing your advertising budget to sell your branded items, but, again, can't you spend a larger part of your budget than you have in the past in helping to create a demand for the lesser cuts? Let us give the housewife more recipes, more suggestions on how she can serve the least expensive cuts of meats.

According to some investment bankers, no other industry has as much usable fixed assets completely charged off as have you in the meat packing industry. In spite of this and many other advantages the meat packers possess, you find it extremely difficult to make a reasonable profit on sales. Your profits, it appears to me, practically always result from market movements, short trends as well as long ones, rather than on the merchandising of your principal product, meat. You do an excellent job on pharmaceuticals, fertilizers, poultry and packinghouse by-products, but why not make the meat packing business more profitable?



ACCOUNTING

"Accounting Problems of a Growing Enterprise" by Paul Burch — "Standards and Their Application to Product Costs" by C. P. Elsen — "Cutting Down the Red Tape" by T. G. Redman.

Accounting Facts are Kept Current



BURCH

I WANT TO CONVEY TO YOU today my personal conviction that accounting people in our industry have within their grasp an enormous opportunity to play an increasingly vital role in their companies.

In no other modern industry are the risks so great and the rewards so small. In few other industries must management make so many quick decisions per day involving such large sums. Their batting average has to be good, for the price of error can be disaster to the enterprise. In this business there are years when you can be right almost all the time and still not make a profit since margins are so narrow.

The significant point which we accounting people must forever remember is that these countless quick decisions, involving so much money and risk, must be made on the basis of information—information in the possession of management men who make the decisions—information which we are called upon to supply.

Accounting, as defined by Webster, means the keeping of records. This seems to me to be a satisfactory definition for a dictionary, but it seems to have a passive connotation as opposed to the more active or vital definition I feel would describe the accounting called for by modern business. Actually, accounting is keeping score of what happens in our business each day.

In the middle of a crucial baseball game when the manager is making tactical decisions designed to win the game, he usually is influenced less by the score of yesterday's game than he is by the score of the current game in which he is engaged.

GUIDING BUSINESS TACTICS: While accounting must provide the records of the past games as a basis for strategic maneuvers of the business, it takes on new importance and vitality when it can quickly and efficiently provide the necessary information to guide management's tactical decisions which govern the daily affairs of the enterprise.

No doubt you have heard many times that accounting

and accountants are necessary evils of the meat packing industry. This attitude grows out of the assumption that accounting is primarily concerned with "ancient history" whose principal value is to provide background for long range, strategic planning. We have a responsibility to ourselves and management to change this antique conception to one in which accounting is recognized as one of the tactical tools of the business which contributes to vital, daily decisions which shape the immediate future of the business.

Perhaps we are to blame for our predicament. How long have we been giving the same old kind of information and reports to management? Have we made any determined effort to improve the information we give them? Have we been negligent in being creative, of instituting new reports and better reports which would become tools to assist management in its every day decisions?

When do accounting problems of a growing enterprise begin? They begin on the first day the company opens its doors for business. True, the early accounting problems are simple, especially if the business is small enough for the proprietor actively to supervise all phases of the operation. But, when a business grows, accounting problems have a way of growing up with the business.

Then, part of the problem is to make such accounting methods progress at the same speed as other phases of the business and maintain a balanced relationship with other operations. The only way to avoid fossilization or bureaucratic growth in the accounting department is constantly to devise newer and better methods to meet the current requirements of the enterprise and properly to anticipate the requirements of future growth.

Almost without exception examination of accounting procedures of companies which have enjoyed substantial growth, whether quick or gradual, will usually reveal an astonishing number of obsolete or unnecessary reports or records which have been perpetuated and justified by a single excuse—"we've always done it this way."

With the vast number of report-making and record-keeping chores which have been fastened upon us in recent years by governmental and credit agencies we scarcely need to point out the absolute necessity of utilizing our remaining time and energy for the sole activity of providing only such reports and records as will be needed and used to help make the enterprise function more effectively.

A growing enterprise is almost always the product of

creative management thinking. If we in accounting get into the creative attitude we can't stagnate, our methods can't become obsolete, and we will play an active, vital role—not a passive role—in the affairs of our companies.

No matter what the size of your company and no matter what its plans for future growth, I suggest we measure every present and future accounting procedure against a yardstick containing four standards:

1. *Is the report or record absolutely necessary to the profitable operation and growth of the business? In other words—will it be used?*

2. *Is the report or record available to management soon enough to match the swift tempo of this business?*

3. *Is the report or record or method of providing it adequate considering the anticipated growth of the enterprise in the next 12 or 24 months?*

4. *Can we provide a better report or record—or provide it faster or cheaper than we do today?*

Management in a small, successful business must have a broad knowledge of the business and, without exception, will have close enough contact with the operation so that they know whether or not product is produced in a manner to conform to standards acceptable to people who will buy the product. They can, by a simple method of calculation, keep the right score and determine whether or not they are realizing a profit or a loss.

CLOSE CONTACT LOST: As a business grows management loses the close contact previously enjoyed when the business was smaller and soon finds that due to this loss of close contact the simple method of calculating results does not reflect the actual score at the end of the month. Why? A number of factors may be responsible.

Perhaps the yield was not obtained in the curing operation, or too much shrink occurred in smoking or cooking, or product was graded improperly or mishandled in its movement from the various departments resulting in damage. Perhaps there was waste of labor and supplies, market variations or other factors contributed.

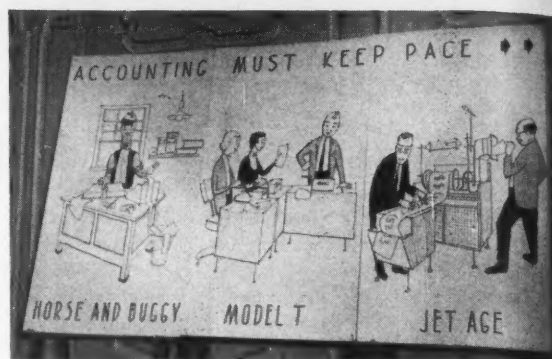
Management becomes aware that a better scoring system is needed. Additional records must be installed and more reports will have to be prepared. The question then arises, what additional records and reports will be most helpful? At this critical point it is easy to forget that records and reports become valuable only when they are furnished as soon as is humanly possible, if they are carefully studied, and if they are concise, easily understood and used to effect the desired result.

The right decision regarding accounting at this point can help the packer make an honest quarter (That's a dollar after taxes these days!). The wrong decision can give him a lot of useless reports and increase overhead.

Since the meat packing business is so complex and so variable it is generally believed that a standard set of records, or a standard set of reports, would be impractical. Therefore, it is up to you to decide what you can do in establishing a better scoring system for your business.

Management needs to know many things about what is going on in the business. It needs to know: What is produced? Is it being produced in the same manner as it was when the principals were able directly to supervise in the plant? Is it being handled carefully? Is it being billed correctly? Is it being sold at a price to make a profit?

WHAT'S THE SCORE—NOW? All of this informa-



tion is needed quickly! No other business moves as fast as this one. All of us in the meat business become cost conscious. In fact, the people making up management fast become cost accountants by compulsion, whether they like it or not.

Therefore, obtaining an increasingly wide range of information, and obtaining it quickly—becomes the biggest accounting problem of a growing enterprise.

Finally there comes a time in the expansion of a business when we reach the point where we can no longer obtain information soon enough by the use of manual methods. Records become disorganized, accounting procedures break down, the score keepers get behind and reports do not materialize fast enough and therefore lose their value.

When manual methods fail action must be taken to supplant them, usually through the use of mechanical office equipment. The selection of the kind of mechanical office equipment best suited to your business is, indeed, a major decision. Before making your decision, I would suggest that you first establish your objective. That is, just what information will you need? What additional information could be of use? Will the equipment you select today do the job for next year, and possibly the year after?

Remember, when you spend money for office equipment you can only justify the expenditure by using it to devise some means of making more money.

Five years ago I joined the team of Stark & Wetzel. To say that I stepped into a "growing enterprise" is to put it mildly. Those boys run on a fast track and somebody must have been a little late opening the starting gate for the accounting department entry. We were scrambling to close in on the field. Sales and production were running neck and neck, but ahead of the pack. What we wanted was a race that would end in a dead heat. It seemed to me that mechanical equipment would give us our best chance to catch up.

I'd like to be able to say that this decision solved all our problems and that the changeover was smooth and uneventful. But I'd be lying if I did. Brothers, did I bite off a hunk of trouble! Just turn back the pages of time to the early part of 1947. Do you remember how "easy" it was to get adding machines, comptometers, bookkeeping machines and tabulating equipment? Did I say easy?

Well, not knowing any better, we began making plans to find out what accounting information we would need to give management reports that they could and would use, if they had them, and how soon we could get the

reports to them. The problem of making these decisions did not take too long.

The real problem began when we tried to get the equipment. A number of accounting machine engineering salesmen were called in to discuss our problem and to determine if, with their equipment, we could obtain the information we needed.

Of course, as could be expected, a number of new ideas originated. After talking to several salesmen our original plans were completely altered to fit their respective machines. In fact we scarcely recognized some of our original plans at this point.

Finally the good news about the equipment came. If Uncle Sam didn't need it first we could expect to receive the equipment in about two years.

I guess the most natural thing we could have done at this time was to accept this decision and just forget our planning and write off the time we had spent on the project. Thank God, we didn't! It just seemed to make us a little more determined to get what we wanted.

Perhaps it was the Irish in us, and fortunately in our determination or desperation (you can choose your own term), we explored the possibility of using tabulating equipment. Prior to this time we were of the opinion that this kind of equipment would be far too expensive and that our company's accounting problems would not justify the use of such equipment.

TABULATING SETUP: After looking at a few tabulating installations and seeing what was being accomplished with this equipment we became more interested. We discovered we could obtain all of the information we needed and possibly more, and that the cost was not prohibitive. Also, we found we could obtain the equipment in much less time, because it would not have to be custom built to fit our needs. We were sold, and tabulating equipment was chosen, and what's more we were promised delivery in six to eight months.

Changing over from a manual method of obtaining accounting information to a mechanical method, created a set of new problems for us. It would do the same for you, regardless of what kind of equipment you might choose. Our first problem was to sell our own management people on the change, and we began by explaining to them what reports we would furnish them and how we believed they could be used to improve our company's position in each sales territory, and how the information we could supply could be used to assist them in making everyday decisions.

Our second problem was the training of our office personnel to handle the new equipment. This problem was solved much more easily than we expected, because the people from whom we obtained the equipment handled the job for us. They arranged for our people to come to their office, at our convenience, for the training necessary, during the time we were waiting for the equipment. We were able to make the change utilizing our experienced employees. We knew it was an advantage to retain people who were already acquainted with meat packing terms and slang as we built up our accounting department to keep pace with the business, which continued to grow at a rapid rate.

At the time we placed our order for tabulating equipment, we were serving approximately 1100 accounts. By the middle of 1947, and before the new equipment arrived,

we had expanded to where we were serving approximately 2000 accounts. It would be an understatement to say that our record keeping department was slightly inadequate. Our score keepers were getting further behind. Our reports were being completed much too late for any tactical value. This signalled a new warning.

We were made sharply aware of the necessity of planning now for the future in determining what equipment we would need and what accounting information we could be expected to be called upon to furnish management in the future. After completing a plan of longer range we placed orders for additional equipment. We have made it a continuing policy to review our position from time to time to insure our having on hand necessary equipment with which we can obtain the necessary accounting information at all times.

In September 1947, we received our tabulating equipment and began immediately to use it for sales analysis. It was like riding down the street in a horse and buggy—and suddenly finding yourself seated in a Cadillac for the return trip.

That's the way we found the change from manual methods of obtaining figures to a tabulating machine operation. Maybe some of you know some of the troubles we encountered in this change. Believe me, we hadn't bargained for all the problems. After getting our marvelous modern machines we found it hard to reconcile working day and night with so-called modern, high speed accounting, even though we were accustomed to it.

Pessimism was very noticeable in our organization. (English translation: "Those lousy machines won't last a month.") However, the bugs were worked out in a reasonable time and the reports we had envisioned became a reality. Our next step was to use the equipment for our accounts receivable ledger. This was not nearly so difficult as our first experience with sales analysis.

Then we decided to use the equipment to write our sales invoices. We realized that if we could accomplish this that our sales analysis and accounts receivable records would become by-products of this operation. This was, by all odds, our most challenging experience. Our theory was magnificent. Our first performances were stinkers! For awhile we had everyone in the organization upset.

Our salesmen and credit men hated us for trying it—condemned it vigorously—the people in the tabulating department became very discouraged. Things had been going along fine, but now again we were working day and night. Our records were in a mess and it began to seem as though we had finally bitten off more than we could chew.

Of course we had the questionable consolation that we had seen things just as snafu before and had found a way to clear them up to a point where everyone was happy. We learned the hard way, but we learned and overcame the troubles which had almost changed our minds about tabulating equipment. People stopped cursing us and started smiling again. So did we.

If any of you are not acquainted with modern tabulating equipment, you haven't seen the last word in office equipment. As our colored janitor once said:

"Mr. Burch, I sure think those machines do a wonderful job. Man, oh, man, they sure put out the figures. How do they do it? You know, every evening as I turn

out the lights in here, I wait just a second to see if they're going to say 'Goodnight.'"

Accounting problems are not all solved with the acquisition of tabulating equipment, as you may have been led to believe in the last few minutes. Tabulating equipment only helps to solve the problems. With this equipment we now are able to obtain a world of accounting information—all of which is good. With this information many reports are furnished management—and with speed. It might be interesting to you to know that late Monday afternoon we furnish management with a report showing a complete breakdown of our sales, by items, for the preceding week.

Early Tuesday morning, on this same report, we give management the average selling price of each item sold. Also, at this time we furnish them with a report showing a complete breakdown of our sales, by items, for each salesman, and late Tuesday we have a report showing a complete breakdown of our sales, by items, for each customer. A copy of this information is given to the salesman servicing the account.

Another good feature of this report is that it not only reports the customers to whom we sell products, but also includes the names of the accounts not sold during the week. It tells us, as well as the salesman, the customers whom he was unable to sell during the week. Many times differences between salesman and customer are brought to our attention much sooner than they would be in a normal course of events, and can be ironed out before they become serious problems.

The report reveals poor customer handling at once. Therefore, when accounts become ex-accounts because of grievances or change in ownership, or any other reasons, the salesman must request they be removed from our records. It is only natural for salesmen to strive to keep the list at a minimum since such requests for removal must be approved by the sales manager.

Ours is possibly one of the most complete breakdowns of sales being made in the industry but we are still seeking improvements and we always will. That goes for all our reports too.

In closing let me suggest that if we in accounting are tired of being considered a "necessary evil" of the packing business, if we reject the passive definition of accounting as recorded in Webster, if we would become an active part of the creative forces which make a business grow and prosper, let us accept the responsibility for initiating the necessary improvements in methods which will make accounting a tactical tool as well as a strategic tool of management. And let's sell what we believe in to management.

Whether you need mechanical equipment or not is for you to decide after you have made a thorough analysis of your own business. Whether you need to make major changes in your accounting and record system is also something you must decide according to your own investigations.

However, we can all determine that we shall do everything possible to weed out unnecessary reports and records. We can all take a more creative approach to our problems and when we do we'll find ourselves accepted as a more vital part of our respective enterprises.

Let's measure our procedures, present and future, with a yardstick to see "how we're doing." Make up your own

yardstick if you choose. I'd like to repeat the description of the one we like to use:

1. *Is the report or record absolutely necessary to the profitable operation and growth of the business. In other words—will it be used?*

2. *Is the report or record available to management soon enough to match the swift tempo of this business?*

3. *Is the report or record or method of providing it adequate considering the anticipated growth of the enterprise in the next 12 months or 24 months?*

4. *Can we provide a better report or record—or provide it faster or cheaper than we do today?*

Let's keep the score so our managers will know the score—and know it soon enough to do something about winning today's ball game. Let's make accounting tactical as well as strategic. If we do we'll all have a good future solving accounting problems of a growing enterprise.

Place of Standards in Product Costs



ELSEN

KNOWING PRODUCT cost and using this information as a guide for selling price determination is one of the most important factors contributing to a successful meat packing operation. Providing a simple, com-

plete and easily understood method of presenting this information to management is one of the most important jobs of the packinghouse accountant. This can be best accomplished by the use of standards.

Normally we do not think a standard cost system is applicable to our industry. Our industry is generally considered as requiring a process cost accounting system. A standard cost system as visualized in a manufacturing company may not be practical in our industry, but a company can adopt the use of standards in the figuring of product costs. I refer in particular to standards for yields, labor cost and indirect and overhead expenses.

In order to illustrate more clearly the use of standards when figuring product costs, I have prepared several cost tests. Smoked bacon and sliced bacon were used for examples. Yields and expenses used on these tests were selected so as to illustrate particular points which will be discussed in detail later.

The typed items on these charts have been used as standards. The figures used are for illustration only, and do not reflect my company's actual yields or costs. There is such a wide variation between operating procedures and operating efficiency among companies that it is mandatory for each company to determine its own yields and costs.

There are still too many companies in our industry which know little or nothing about their costs, and are oblivious to all types of available cost systems. This is particularly true in regard to keeping records which will enable them to determine their product cost.

Too often when the subject of cost systems is mentioned, we hear answers like: "I am not interested nor do I need costs worked out to the fineness of a gnat's

EXHIBIT "A" Cost-Smoked Slab Bacon

ITEM	DATE CURED					B. P. CURED	
	6/84	8/104	10/144	12/144	14/164	16/204	18/204
1. Green Belly Market Price.....	40.14	41.02	38.00	38.00	32.60	30.10	30.10
2. Curing Labor & Supplies.....	1.20	1.20	1.20	1.20	1.20	1.20	1.20
3. Curing Overhead.....	1.50	1.50	1.50	1.50	1.50	1.50	1.50
4. Total, 1 + 2 + 3.....	42.84	43.72	40.70	40.70	35.30	32.80	32.80
5. Field Cured.....	100.54	101.04	101.54	101.54	107.04	107.04	107.04
6. Cured Cost, 4 + 5	143.38	144.76	142.24	142.24	142.30	144.30	144.30
7. Smo. House Labor & Supplies....	1.00	1.00	1.00	1.00	1.00	1.00	1.00
8. Smo. House Overhead.....	2.00	2.00	2.00	2.00	2.00	2.00	2.00
9. Total, 6 + 7 + 8.....	146.38	147.76	145.24	145.24	145.30	147.30	147.30
10. Field Smoked.....	86.04	87.04	87.74	89.04	87.04	88.04	88.04
11. Cost Line 9 ÷ 10.....	52.85	52.64	49.44	48.43	41.66	38.67	38.67
12. Wrepper.....	.60	.60	.60	.60	.60	.60	.60
13. Labor Wrapping.....	.40	.40	.40	.40	.40	.40	.40
14. Shipping Package*.....	.40	.40	.40	.40	.40	.40	.40
15. Order Filling Labor.....	.50	.50	.50	.50	.50	.50	.50
16. Selling.....	1.00	1.00	1.00	1.00	1.00	1.00	1.00
17. Delivery.....	1.00	1.00	1.00	1.00	1.00	1.00	1.00
18. Total Delivered Cost, 11 to 17.	56.79	55.94	53.84	52.33	45.16	42.57	42.57
19. Selling Price	54.30	54.30	51.70	51.70	44.80	41.90	41.90
20. Profit or Loss.....	2.49	1.64	1.64	.93	.36	.67	.67

* Package Cost based on Delivery in City Order Box. Other box costs are 24¢ Box _____ Cwt.
 50¢ Box _____ Cwt. 100¢ Box _____ Cwt.
 To determine delivered cost cured bellies, add line 6, 14, 15, 16, 17.
 YIELDS AND EXPENSE STANDARDS FOR ILLUSTRATION ONLY. NOT ACTUAL.

EXHIBIT "B" Cost Sliced Dry Cure Bacon, Cello Wrap, Grade A, from Green

ITEM	DATE CURED					B. P. CURED	
	6/84	8/104	10/144	12/144	14/164	16/204	18/204
1. Green Belly Market Price.....	40.14	41.02	38.00	38.00	32.60	30.10	30.10
2. Buttons	2.54	2.54	2.54	2.54	2.54	2.54	2.54
3. Slices	9.54	9.54	9.54	9.54	9.54	9.54	9.54
4. Total Line 1 less 2 and 3.....	52.18	53.10	50.08	50.08	44.68	42.18	42.18
5. Add Labor Boning and Slicing.....	.75	.75	.75	.75	.75	.75	.75
6. Total Line 4 and 5.....	52.93	53.85	50.83	50.83	45.43	42.93	42.93
7. Field	88.54	88.54	88.54	88.54	88.54	88.54	88.54
8. Cost Slices Line 6 + 7.....	141.47	142.39	139.37	139.37	133.97	131.47	131.47
9. Curing Labor and Supplies.....	1.20	1.20	1.20	1.20	1.20	1.20	1.20
10. Curing Overhead	1.50	1.50	1.50	1.50	1.50	1.50	1.50
11. Total Line 8 + 9 and 10	144.17	145.09	142.07	142.07	136.67	134.17	134.17
12. Field Cured.....	100.54	101.04	101.54	101.54	107.04	107.04	107.04
13. Cured Cost, Line 11 + 12	244.71	246.13	243.61	243.61	243.71	241.21	241.21
14. Smoke House Labor and Supplies....	1.00	1.00	1.00	1.00	1.00	1.00	1.00
15. Smoke House Overhead.....	2.00	2.00	2.00	2.00	2.00	2.00	2.00
16. Total Line 13 + 14 and 15.....	247.71	249.13	246.61	246.61	246.71	244.21	244.21
17. Field Smoked.....	87.54	88.54	89.54	90.54	87.54	88.54	88.54
18. Smoked Cost, Line 16 + 17.....	335.25	337.67	336.15	337.15	334.25	332.75	332.75
19. Grade 0 Sliced	5.04	5.04	5.04	5.04	5.04	5.04	5.04
20. Sliced Ends	4.04	4.04	4.04	4.04	4.04	4.04	4.04
21. Whole Ends	1.04	1.04	1.04	1.04	1.04	1.04	1.04
22. Slices	1.04	1.04	1.04	1.04	1.04	1.04	1.04
23. Total Credits, 19 + 20 + 21 + 22.	8.16	8.16	8.16	8.16	8.16	8.16	8.16
24. Total, Line 18 less 23.....	327.09	329.51	328.00	329.00	326.09	324.59	324.59
25. Yield Sliced	84.54	84.54	84.54	84.54	84.54	84.54	84.54
26. Cost Sliced Line 24 ÷ 25	62.04	62.04	62.04	62.04	62.04	62.04	62.04
27. Labor Slicing	5.00	5.00	5.00	5.00	5.00	5.00	5.00
28. Supplies Box etc.	3.75	3.75	3.75	3.75	3.75	3.75	3.75
29. Sliced Bacon Overhead	2.25	2.25	2.25	2.25	2.25	2.25	2.25
30. Order Filling Labor .....	.50	.50	.50	.50	.50	.50	.50
31. Selling.....	1.00	1.00	1.00	1.00	1.00	1.00	1.00
32. Delivery.....	1.00	1.00	1.00	1.00	1.00	1.00	1.00
33. Deliver Cost Sliced Bacon.....	75.46	75.46	75.46	75.46	75.46	75.46	75.46
34. Selling Price.....	65.46	65.46	65.46	65.46	65.46	65.46	65.46
35. Profit or Loss.....	10.00	10.00	10.00	10.00	10.00	10.00	10.00

To determine delivered cost of smoked Slices
 Slab Bacon, Add line 18, 30, 31, 32. Plus 40¢ Shipping
 Container. YIELDS AND EXPENSE STANDARDS FOR ILLUSTRATION
 ONLY. NOT ACTUAL.

whisker," or "I could not afford a setup like that, as I have only a small business."

Another standard complaint is: "What good is a cost system enabling me to know my costs, when my competition constantly sells meat at prices I know are far under my costs?"

Another remark I often hear when asking about a low price on a product on which a surplus has developed is: "I have to move it. What do you expect me to do, eat it?"

There may be some truth in any one of these statements. But to accept them and ignore the obvious benefits to be gained by knowing your costs is like an ostrich burying his head in the sand. The biggest curse in our industry is the adoption or resignation to the theory that "the market or competition determines the selling price of our product, regardless of cost."

Accepting this theory is the quickest way to business failure. It is undoubtedly one of the reasons why our industry has the lowest profit margin of any in this country today. This is a perfect example of the tail wagging the dog, instead of the dog wagging the tail.

You and I, as accountants, know only too well that this condition exists. Our industry is such that there will always be some packer selling a product at a low price because he has a product for which he must find a home. Any packer who has survived in this business to date should be enough of a factor in his own sales area to be able to set his sales prices on costs, rather than his competitors' prices.

You men as accountants can do more than anyone in your organization to change this picture. In many cases you may have a selling job to do. You must think in terms of costs and results today, instead of historical results.

Too often the cost figuring in our industry is done on the back of envelopes or other sources of uncoordinated records. By applying good accounting techniques and using estimated figures and projections and keeping them under constant adjustment, a very effective system of controls can be developed. Management must have cost information available promptly. This can only be done by the use of standard costs.

Figures must be available daily or even on an hourly basis. Standard costs are based on predetermined standards and provide control information which will disclose poor product yields, excessive labor costs, etc. Only adequate and timely cost information provides accurate checks of practices resulting in excessive costs. Good supervision can avoid and correct waste, but cannot do the job alone.

The packinghouse accountant has a tremendous opportunity in our industry to supply top management with the tools to do a complete job. A good accounting system with a good man with vision in charge will pay its costs many times by expense reduction, by better all-around control, enabling management to do a better buying and selling job. It will eliminate many loss transactions by knowing product costs and thereby channeling the product to its greatest realization. The system should point the way—whether to sell the product green, smoked or cooked.

Product costs are all-important and too often are the neglected stepchild. Keeping up-to-the-minute product costs—and I mean minute, not hourly, daily or weekly—

is the key to successful operations, the difference between profit and loss.

Part of the reason for the unhappy plight of our industry during the past two years is the inadequate processing margins provided in OPS regulations, particularly CPR 74, the pork regulation. It is undoubtedly the result of inaccurate or misleading information furnished OPS.

This is not said in defense of OPS. Those people undoubtedly received quite a bit of conflicting information. They undoubtedly fixed product costs on the basis of figures gathered from a comparative few and probably not representative companies. They used figures which netted the least processing margin to the industry.

As a member of a committee of an independent group making an independent survey to determine fair processing margins, I was amazed to find the wide variations in yields and expenses which existed within the industry. Major differences exist in product yields because of differences in operating procedure and processing equipment. This will also cause wide variations in expenses, direct and overhead.

Basing your prices on cost figures, yields, expenses, etc., other than your own is inviting disaster. In a normal free economy, the average packer can overcome inefficient operation, lower yield, etc., by knowing what he is doing and securing a higher price for his product. This higher price can be secured by producing a superior product, by giving more service or by doing a better selling job. Under price control, this packer is unable to realize higher prices and losses are inevitable.

Exhibit A for smoked slab bacon is a simple standard cost form which can be used for numerous processed products, such as hams, picnics, boneless butts, etc. Exhibit B for sliced bacon is similar in principle, but goes a step further as it shows a method for handling by-product credits. They are set up so as to show the possibility of including different averages on the same test form, thereby showing comparative results of related averages. This form can be used by the cost clerk for figuring the cost of a product and in turn used by the sales department for determining selling prices.

Of the standards used on these tests, yields are probably the most important. Since it is not practical or possible for a smaller company to weigh all its products in the various processing stages, most companies must rely on tests to determine their processing yields. Standard yields can be set on the basis of tests. I use the plural "tests" as enough tests must be made so as to determine a fair average. They must be kept current and up to date, and must reflect any changes in processing procedure.

In setting a standard yield one must consider the purpose for which it is to be used. If used to judge the efficiency of a production department, such as smoke yields from cure, it should be on the high average to insure maximum production. If it is to be used in figuring costs of a product or determining a selling price, it should be on the low end of the average. If possible, always have some safety margin in your calculations of product cost.

For example, if your tests indicate a yield of from 88 to 90 per cent, it would be wise to use the 88 per cent figure in determination of the product cost and 90 per cent for a goal for the smoker to obtain.

The following important factors are often overlooked (*More ELSEN on page 239*)

Seek Understanding By Public

CHAIRMAN COREY SAYS MAJOR AMI GOAL IS
TO GAIN APPRECIATION OF INDUSTRY PROBLEMS



COREY

IT HAS BEEN A BUSY Institute year, and as chairman of your board of directors, I have been close enough to what has been going on to be able to report to you first-hand that our Institute staff has been hard at work.

Not only the staff of the Institute, but the man-power of the industry, which the Institute mobilizes, has had a busy year.

As rugged an individualist as I conceive myself to be, thoroughly convinced that the essence of the superiority of our private enterprise system lies in its competition, even so I recognize that there are times when the competitors must join in a common front, must unite in a common name, and win together in a common cause.

Apart from common causes, we need to see ourselves as an industry performing through our competitive individual conducts, a great necessary function. That picture of ourselves we get as we work through our industry organization, the Meat Institute; as we get that picture we develop an esprit de corps which is as valuable to the meat packing industry as it is to an army in the field of battle.

As an industry we have many jobs to do, which we cannot do so well as units apart.

It is to our credit as competitors that we can live and work together; that we find some of our most understanding and durable friendships among our competitors; and that we have cooperated so well through our Institute in the hard work of the past year.

One of our jobs, of course, has been the effort to persuade Congress and the American people that price controls in the meat industry will not accomplish the purpose for which it is claimed they were enacted; indeed, will harm that purpose and harm everything connected with our industry, from farm to dinner table.

That job isn't done yet; although our industry, heading up through the Institute, has more nearly accomplished the job than appears; but it takes more facts, more proof, yet more work on all fronts and levels of American public opinion before price controls again can be taken off the books. Our worst difficulty in this fight is that the public is not yet sufficiently hurt to realize the

damage which price controls are causing to production and distribution.

No need further at this time to tell you of the harm of price controls; no need to tell you anything about it; except to bring the matter up long enough to pay my respects to the organization personnel for leading us so effectively.

Combatting and eventual elimination of price controls is a public relations job of great import; it's a tremendous undertaking in public education—to bring understanding of our industry to the public.

The past year has been one of increased effort in phases of better understanding of the meat packer by the public.

One of these has been an aggressive continuation of the Meat Educational Program started 12 years ago. Another has been a step-up in the public relations type of advertising which was begun in 1943 within the scope of the Meat Educational Program.

Do you remember when meat was blamed for high blood pressure, heart conditions, gout and cancer?

Those highly incorrect medical and nutritional theories were widely held 12 years ago. Where are they now?

Today meat is the large part of the universally prescribed high protein diet. Meat is recognized for its nutritional goodness. It is good for young and old, well and sick, for lean and fat.

What has brought about this change? First of all, of course, meat itself. The more the scientists got digging into meat, the more vitamins and proteins and minerals they came up with. And, as each day passes, the absolute essentialness of meat to the human body is established and re-established over and over again.

Secondly, the business enterprises worked in their competitive ways to make meat more attractive, more palatable, more dependably healthful, better keeping and better eating. Farmer, meat packer and retailer all have contributed here, and I think I can say accurately, meat packers most of all.

Thirdly, shall we say, the Institute. The common cause. The united attack by the industry through the Institute upon the thoughtless and semi-medical misconceptions.

It has been a wonderful change. The battle isn't over.

BACON PROCESSING by PRESCO HYDROJET Curing Brine Infusion



U.S. PAT.
NO. 2466772

NOTE THESE REVOLUTIONARY FEATURES

SIMPLE OPERATION — One easy manual operation is all that's needed. THE PRESCO HYDROJET automatically does all the rest.

UNIFORM CURING — Brine is injected rapidly through 66 stainless steel needles, assuring uniform diffusion.

RAPID TURNOVER — Pork bellies are processed fast, cutting storage, handling and operating costs way down.

HIGH PRODUCTION — Six or more pork bellies

can be completely infused in a minute — more than 300 an hour by one operator.

RUGGED CONSTRUCTION — Stainless steel and tough plastic materials are durable and easily cleaned.

LOW MAINTENANCE — Few parts subject to wear, breakage or maladjustment. Service requirements are simply and easily handled by operating personnel.

LOW COST — Designed and engineered to be a moderately-priced investment for processors both large and small.

The PRESCO HYDROJET is manufactured and sold only by

PRESCO PRODUCTS

Flemington, New Jersey

PRESCO FLASH CURE

For the Complete Processing of Bacon

in 12 HOURS

... when used with PRESCO HYDROJET for infusion of properly chilled fresh pork bellies

- ★ With THE PRESCO HYDROJET, bacon processors can reduce normal curing time under refrigeration to about 48 hours when conventional curing materials are used.
- ★ But by using PRESCO FLASH CURE in conjunction with THE PRESCO HYDROJET, this entire curing period can be eliminated...

- ★ Refrigerated space is required only for chilling
- ★ No need for expensive curing boxes
- ★ No box or truck moving or cleaning
- ★ Sharp reduction in labor and handling costs
- ★ Immediate turnover in investment
- ★ Excellent color, flavor and holding qualities

**PRESCO FLASH CURE is manufactured and sold only by
PRESERVALLINE MANUFACTURING COMPANY
Flemington, New Jersey**

The nutritional value of meat, with its special approval of the medical association, must continue to be kept before the American public. But it has been a 12-year fruitful fight, and some of the best two-page spreads in color, telling this story of nutrition and health deriving from meat ever to have been printed, appeared in 1952.

Now, a more acute problem than the one of changing medical misconceptions about meat is to change public thinking about the meat packing business.

All sorts of factors enter into this thinking which do not apply to a pork chop or a steak.

There is the politician's need for a whipping boy. There is the envy of bigness. There is the pattern of distrust set by the name-callers of a half century ago. And who gets blamed by the public when untrue charges of profiteering or unreasonable profits are hurled around? It is you gentlemen in this room—the heads of our member companies—who are held up to scorn and unjust criticism.

There are the complicated economics of our industry which, with or without prejudice, are not easy to understand—and still more difficult to explain in clear and lucid manner.

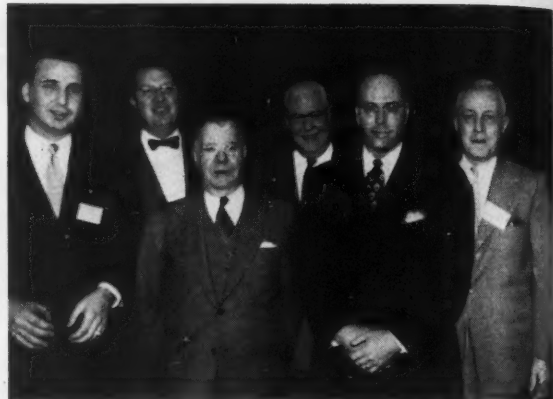
In our great job to secure public understanding, we are only starting. With a small budget over the past several years, we ran our public education advertising in magazines that had high I. Q. readership and, quite likely, high ultimate leadership potential. You may have seen the ads—ads about our small profits—ads about supply and demand setting prices—ads about the packers' utility and efficiency—ads about our service to the producers of livestock and consumers of meat.

We need to do more of this; we need to do it better and in more and bigger places. Everyone knows it's a long-time job and a long-range job.

Our very reason for being is to obtain good understanding and our public relations ads are only a beginning.

That our messages here are reaching pay dirt has been illustrated in a number of ways.

For example, *Fortune*, in an article recently pointed out how meat packers literally have to scrape the floor for profits. *Business Week* recently pointed out that a



Stanley Grainer and R. M. Conner, vice president; G. D. Allman, chairman of the board, and E. M. Dodds, president, all of U.S. Cold Storage Corp.; Wayne Jackson and Bill Etz, vice president, both of Wilson & Co., Inc., Chicago.

major electrical manufacturing concern was able to net three times the profits of a meat packer on just half of the packer's sales.

The railroads have had practically to break down in plain sight of everybody before a slow change in attitude has taken place with the public—a change from political hate of the railroads to a final and perhaps too late realization that the railroads need help.

It is pathetic that the great iron horse of transportation has been saddled by regulation on the one hand and unstoppable rising costs of operation on the other hand, with all the time a public uninformed and unsympathetic standing by.

We do not want it that way in the meat packing business. America needs a free-wheeling, highly competitive, able and capital-attracting meat packing business.

We must not have the crippling regulation of which price control can be the foot in the door. We must not be permitted to be victims of a rising wage cost to the degree that is oppressive in its intent.

And so let me come to this question of profits. Our public relations advertising and publicity has acquainted some small part of the public with the fact that they are small.

Yes, they are small; too small; improperly small; dangerously small.

Our industry profit last year was the smallest of any major industry profit. It probably is going to be even smaller this year.

Despite the tremendous size of our industry, represented by approximately 4,000 meat packing companies, producing and selling a day by day necessity, a necessity of

1. Jud Barton, cut and kill foreman, and Charles H. Wallace, vice president, both of Cleveland Provision Company, Cleveland.
2. Howard M. Wilson, president, American Mill Service Co., Inc., Minneapolis, and Mrs. Wilson.
3. J. A. Larkin, general sales manager, and J. W. Christian, vice president, The Cudahy Packing Co., Omaha.
4. Robert M. Perkins, Linker Machines, Inc., Newark, N. J., and C. A. Pemberton, C. A. Pemberton Co., Ltd., Toronto, Canada.



every meal, despite our ranking in size among all industries, our profits are exceedingly thin.

Despite our size, there are 14 individual companies in other industries in the United States which showed larger net profits last year than our entire 4,000 companies.

Despite our constant improvements and despite our purveyance of the essential life-giving meat, the net profit of general manufacturing last year, the average rate of net profits on sales was eight times larger than that of the meat packing industry.

I don't wish to sound unreasonably critical—but we must not let controls become a crutch for us to lean back on and alibi our dismal financial picture. We must face the facts.

Profits, of course, are not merely take-home money. Profits are not merely dividends. When we are credited with or charged with the lowest profits in industry, what is meant is that we have the least percentage of income to build new buildings, to buy equipment, to pay for research, to hire additional people.

Our profits now are much less than a penny of each dollar we take in, and out of that fraction of a penny must come all new buildings, equipment and dividends.

Gentlemen, our profit is too low. It is no longer a credit to us; it is a source of danger.

It is, of course, fine to be able to say to the housewife that if she had got her dollar's worth of meat less our profit she would not have got it a penny cheaper. No politician with a grain of truth in what he says can deny the fact that the industry performs its function at a miraculously low charge upon society at large. It is a wonderful accomplishment, but, gentlemen, I am tired of it.

I would like to see our company make more money. I would like to see the whole industry make more money. We need to insist upon a wider margin of operation.

LEFT: Seated are Jack Dowding and Harold E. Schaller, chief engineer, both of John E. Smith's Sons Co., Buffalo; Tom Bush, development standardization, Armour and Company, Chicago, and Herbert L. Hunn, Buffalo, treasurer. Standing are Jack Sabean, vice president, and Ed Vail, both of John E. Smith's Sons Co.

RIGHT: Seated are H. D. Morris, Armour and Company, Chicago; J. R. Hughes, Continental Can Co., Chicago; G. W. Monroe of Armour, and R. J. Gunderson of Roberts & Oake. Standing are George Hust, president, H. & M. Provision Co., Chicago, and Wilson B. Larkin, manager of sales, central division, Continental Can Co., Chicago.

If our company all its life had only made the profit on the dollar that it has had to console itself with during the last dozen years, then instead of 8,000 employees we would have only 2,000 employees.

There were years in the old days when we made some money and that money went into new machines, new products, new merchandising, new inventions and new payrolls.

It is time that the golden egg of profits be appreciated for what it is.

Even some labor leaders are coming to the defense of industry in its quest for adequate profits, as has been evidenced by one prominent individual who recently declared: "Free enterprise includes the right of businessmen to invest their savings, experience and talents in productive industry and to make fair profits."

Business, our business, your industry and mine, cannot stand still. It needs new facilities, new tools and new payrolls. Tools and equipment are being depreciated on the basis of their original cost; whereas replacement costs twice the original cost.

We need to make more money. The way how is each individual company's own business, but you need to be warned that the present margin of operation is too thin. The ice is too thin.

Whatever methods you choose—and they must be legitimate—there must be an insistence that the cut-outs show you a profit.

It is disgraceful that most of the cattle killed in the United States by the meat packing industry since OPS controls were imposed in early 1951 have not netted the industry enough to buy a good suit.

We need to brace up our backs on margins.

Let us look to our long-time responsibilities and insist upon greater earnings for our stockholders and for our improvements.

Tomorrow the annual meeting will end. The tables will be cleared and the chairs stacked. As you depart for your homes, keep the theme of the annual meeting—PROGRESS—alive in your activities. Return to your homes and businesses with a conviction that improved profits are not impossible and with a fine, firm resolve of doing something about them. Someone is credited with having said that the last three letters in the word American are C.A.N. Let's remember that when we go home.



American Liberty Is at Stake

COLUMNIST MOLEY SAYS NATION FACES CHOICE
BETWEEN STATE SOCIALISM AND FREEDOM



MOLEY

IT IS A VERY happy occasion to join with you here and to express the hope that the slow education of the public which you have so effectively carried on will ultimately result in the abandonment by all parties of the policy of controls so that we can all get meat in the quantities and at the price that we want it.

I may say some things today that have some reference to politics because that has been my major interest and my specialty for a great many years. But I am not trying to make a political speech because I have a feeling that we don't save many souls by political speeches. Most people have made up their minds.

Mostly what I will say will have to do with certain principles that lie beneath these political contests we are witnessing. Let me add that if my illustrations happen to come from the Democratic side too much, it is perhaps because I have been a Democrat for most of my life. I don't know what I am now, but I am not in favor of some of the policies enunciated by the Democratic Party.

This fight for the preservation of American liberty is something that must go on, regardless of what party happens to win this election. That is because both parties are pretty well affected by a breed or a species of individuals who believe it is their divine mission in life to destroy the liberty of other people. One of the discouraging things in a campaign such as this is the tendency of partisans, as well as people on the sidelines, to divert the attention of the public from the real issues.

It is an unfortunate thing that the public's attention must be riveted on relatively insignificant matters while important matters remain unsolved and untouched. That has been pretty true of this campaign. Therefore—and I wish this could be extended to all political speakers and American citizens—I would like to have them forget about the amount of the incomes of Stevenson, Sparkman, Eisenhower, Nixon and Joe Dokes, candidate for sheriff, and get down to something more fundamental.

I am much more interested in the income and the outgo of a character known as Uncle Sam, and I think that is where our interest should lie. There is something that is

in danger of being lost that is much more important than the stealing of a few dollars by people here and there or the cheating on income taxes, and that is the question of whether our liberty is being stolen.

The thing that the people of this nation ought to be facing is a choice between two forms of political and economic life. One is the form of our traditions, in which individual liberty prevails, limited only by wise laws, imposed for the benefit of everyone. The other is the dominance of the state in human affairs.

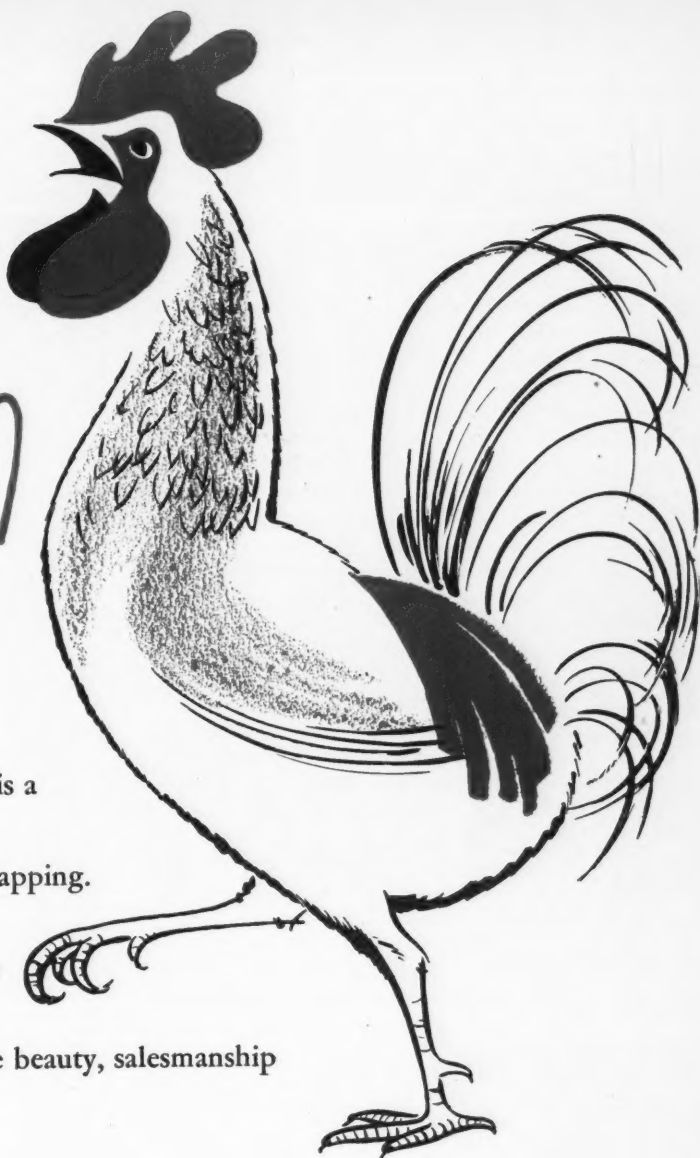
The thing, however, that makes it so difficult for all of us to face up to this issue is the subtle way in which the alternative of state socialism, or state statism, appears. That is one of the reasons why it is very, very difficult to find it. It comes not as a tyrant, but as a guardian.

Those two words, "tyrant" and "guardian," were used by a man by the name of de Tocqueville of whom you have all heard. He was, I suppose, the greatest commentator on our American system. He was a Frenchman, and he wrote 120 years ago and warned us—and his words have a very profound application today—that we mustn't fear here the attack of a foreign enemy, or the coming of a man on horseback, or any of the forms of tyranny in its more repulsive aspects. He warned that it would come in a very soft form, and take our liberties while we were seemingly enjoying the benefits of a form of state protection.

I want to read to you, by way of a preliminary to what I have to say about controls and the danger of statism in this country, what de Tocqueville said 120 years ago. This was his warning to the American people, and it is a warning that is just as vital and important—in fact more so now than ever before because of the forms in which those who would take our liberty present themselves. He said:

"In this democracy in America, I seek to trace the novel teachers under which despotism may appear in the world. The first thing that strikes the observation is the innumerable multitude of men, all equal and alike, incessantly endeavoring to secure the petty pleasures with which they glut their lives, and for their happiness

attention



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such a government willingly labors. But that government chooses to be the sole agent and only arbitrator of their happiness. It provides for their security, foresees and supplies their necessities, facilitates their pleasures, manages their principal concerns, directs their industry, regulates the descent of property, subdivides their inheritance; what remains, then, but to spare them all of the care of thinking and all of the trouble of living?

"This supreme power, this government, covers this surface of society with a network of small, complicated rules, minute and uniform, through which the more original minds and the more energetic characters cannot penetrate.

"The will of man is not shattered, but softened, bent and guided. Men are seldom forced by it to act, but they are constantly restrained from acting. Such a power does not destroy, it prevents the existence; it doesn't tyrannize, it compresses, extinguishes and stupifies the people until each nation is reduced to nothing better than an income of timid and industrious animals of which the government is the shepherd."

Now, that was the finger of warning 120 years ago and if ever there was a prophetic thing said, it is that.

Let's take a look at some of the people who are trying to impose this sort of thing upon us. One thing they are doing is stealing the vocabulary. They call themselves "liberal." All I can see in connection with their liberality is the liberality they have with other people's money.

When the word "liberal" was coined 150 or more years ago, it had something to do with liberty. It was the throwing off of governmental restraint. Yet the "liberal" of today has a program with more governmental restraint. It gives lip service to democracy, talks about democracy. But it doesn't really believe in democracy because if it believed in democracy, it would let people govern their own affairs, and not try to tell them what to do all the time. The latest thing is that they have stolen the word "conservative." These fellows are "liberals" and "conservatives," and there isn't any place for the rest of us to go, apparently.

Now then, another thing I don't like is the attempt to get the support of the people—the man in the street—but actually have nothing but contempt for that man. Somebody said that the proper name for people of that kind should be "We elite." I think that was coined by Henry Wallace some years ago, because he used the word "we" so many times. "We elite" are those who say we must do this and we must do that and we must do something else, because they are the chosen people who tell everybody else what to do. They are the "elite."

Of course, what is meant by "we" is what is deemed to be wise to be done by a lot of people for a few people who happen to control government. I suppose the most perfect example of this type of thinking is embodied in the writings and speeches of the First Lady of the Land Emeritus. Constantly, she is referring to what "we" must do.

I don't like to throw in this note of possible political significance, but in Mr. Stevenson's speech the other night, he used the word "we" 56 times. I counted them yesterday. I counted them also to see what the antecedents of the "we's" were. Twenty-six of the antecedents referred to the Democratic Party, 25 referred to all the people in the country, one referred to the people of Il-

SIXTY-NINE CONVENTIONERS

1. Benjamin D. Carr, partner, Joseph Carr's Sons, Albany, N.Y.; W. J. Worcester, The Globe Co., Chicago, and Mrs. and Max Russer, general manager, Max Russer, Inc., Rochester N.Y.
2. J. J. Driscoll, Pueblo Packing Co., Pueblo, Col.; Dave Averch, Capitol Packing Co., Denver, Col.; Joe N. Gubbins, midwest sales manager, Paterson Parchment Paper Co., Bristol, Pa., and A. D. Curtis, president, Pueblo Packing Co.
3. R. W. Ransom, superintendent, technical operations, John Morrill & Co., Ottumwa, with J. K. Stephens, executive vice president; L. L. Duncan, general superintendent, and Rumsey Ewing, plant superintendent, all of Krey Packing Co., St. Louis.
4. George Reser, master mechanic; H. A. Morgenstern, provisions; Mervin Applegarth, foreman, and E. C. Kinman, chief engineer, all of The H. H. Meyer Packing Company, Cincinnati.
5. J. S. Cox, New York, and Frank Batek, manager, casing department, Chicago, both of Armour and Company, and Ray Lavery, secretary, Lavery Nowak & Co., Chicago.
6. M. V. O'Connell, assistant general manager, Livestock Conservation, Inc., Chicago; E. M. Whisnant, engineer, and Ben White, vice president, both of the White Packing Co., Salisbury, N.C., and Wilbur Plager, field secretary, Iowa Swine Producers, Des Moines.
7. Peter Schrage, assistant to the buyer, Pfaltzer Brothers, Chicago; H. R. Regelin, assistant department head, dry sausage, Armour and Company, Chicago; Robert Snapp, general buyer, Pfaltzer Brothers, and H. G. Potts, vice president, Lindner Packing Co., Denver.
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15. K. D. Kubaugh, J. J. Flanagan, J. R. Wainwright and H. A. Scherer, advertising manager, The Allbright-Nell Co., Chicago.
16. Charles J. Hoerner, S. Blondheim & Co., San Francisco, and C. E. Dippel, president, C. E. Dippel & Co., New York.
17. D. E. Flory, packinghouse broker, San Francisco.
18. Mrs. Cain and Milford H. Cain, president, Cainco, Inc., Chicago.
19. H. H. McKinnies, district sales engineer, Milwaukee, and Deane Perham, Chicago, both of Vilter Manufacturing Co.
20. Jos. Belack, vice president, Friedman & Belack Co., Philadelphia, and Harry K. Lax, F. C. Rogers Co., Philadelphia.
21. FRONT ROW: Jack Witmer, sales manager; G. W. Gible, secretary-treasurer, and Stephen B. Caporal, beef purchasing division, all of Palmyra Bologna Co., Palmyra, Pa. BACK ROW: Harry M. Sellers, plant superintendent, Palmyra Bologna Co.; Burt Andrews, manager, Andrews Dried Beef, Nazareth, Pa., and Nat Goldis, treasurer, Goldis & Gross, Inc., Philadelphia.
22. Paul Van Keuren, F. M. Rutledge, David Cornell and Jim Wetherbee, all of Sutherland Paper Co., Kalamazoo, Mich.

linois and four referred to the Democratic Party in Illinois. It's a shell game, you don't know who "we" are.

But "we" did an awful lot of things, according to this speech. "We" abolished the kerosene lamp—this is a quotation from the speech; otherwise I wouldn't use it. "We" abolished the hand pump and "we" abolished the outdoor privy. Of course, he went on to say that these benighted Republicans opposed all of these great reforms. It may be that the benighted Republicans at least wanted

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8, 1952



to keep something in existence to suggest past days that were perhaps more onerous and difficult to live through, but at any rate involved a reasonable degree of choice.

Of course, the interesting thing, with reference to abolishing the kerosene lamp, is that a man named Edison had something to do with it, but he isn't "we." And as to the third great reform, there was an interesting story, if you would like to get the origin of this. Since Mr. Stevenson has filled his speeches so full of literary allusions, let me cut loose a little. In "Portraits in Miniature," there is a delightful essay about an English nobleman, a rather eccentric man back in the 18th century who invented that which replaced this outdoor relic of bygone days. So that it wasn't entirely the Democratic Party that abolished these eyesores on our civilization.

In other words, somebody did know before 20 years ago that these things were on the way out.

He has his fun, we can all have fun. I don't want this to be partisan. He says the Republicans are without any sense of humor—that ought to let me out.

I was struck by this thought when I was reading the other day in a book by Mr. Arthur Schlesinger, jr. Now I am getting into academic life and out of politics (he happens to be writing speeches down in Springfield, but never mind). If you read the last chapter in his book on the age of Jackson, you will find one of the most amazing demonstrations of lack of faith in the democratic process that have ever been written. He calls Mr. Jackson the "essential liberal." In the characteristics of this great movement under Jackson was the growth of the concentration of power in federal government and aggrandizement of the power of the President.

Then he turns to Jefferson, for whom he has nothing but unmitigated contempt, and I offer you the following as a choice example of this attitude. I just want to get the record straight about this man who is extolled every time his party claims it descended from Jefferson.

He quotes a myth as being "a body of images capable of evoking instinctively all the sentiments which correspond to the different manifestations of the movement." This was the Jeffersonian myth, he says, that the people

were fit to govern themselves. Thus he points up that the great faith of Jefferson in the capacity of people to shape their own destiny, provided they should enjoy the blessings of liberty, is a mere superstition. It cannot be taken as a basis for the creation of public policy. You can't trust people to determine their own policies. It must be determined by someone of superior wisdom. Then the book goes on to trace the end of the Jeffersonian myth, and occasionally returns to Jefferson only to find flaws in it. He wrote, "Somehow or other, this superstition lived on into the Nineteenth Century in spite of every effort that had been made to abolish it."

Finally, Schlesinger says: "Slowly the liberal tradition was overhauled and the Twentieth Century saw the final disappearance of the Jeffersonian inhibitions."

First Theodore Roosevelt, then Woodrow Wilson and, finally, Franklin D. Roosevelt, put a quietus on any of the nonsense that Jefferson entertained and taught his countrymen.

All I can say is that this disbelief in the slow process by which people find their own way and by which the free market operates, and all of that, is nonsense. It seems that the man who has believed most implicitly in it is the one now in office. Why is it that the smaller men get the greater their pretensions to power?

I have dwelled on this—it is important—for one reason that I mentioned a moment ago, in that he is in a position of great influence now.

This group of which Mr. Schlesinger is a charter member has banded together in something known as American for Democratic Action. These views of human nature, this contempt for the slow processes by which people determine their own destiny, this unwillingness to let prices be fixed by the simple action of economic law, this desire to hustle people along in pre-determined lines of policy, this dependence upon their own infallibility—all of it is characteristic of all these self-styled liberals of the present time. Their number is legion. We have got them in both parties. A few names stand out—Senator Humphrey on one side, Senator Lehman of New York, Senator Morris, Henry Wallace, Wilson Wyatt and many others.

Now, I know something about this group because I was in Washington when they came in and I know their feeling. These are not venerable people. These are people who conceive themselves to be aristocrats, intellectual leaders and drivers and teachers of the people.

This is a legitimate question—not where the campaign contributions of Mr. Stevenson came from, but where he gets his intellectual inspirations? That is much more important in determining the question of whether he should be placed in the office of President.

The same thing is true of Eisenhower. Where does he

1. C. H. Watts, buyer, and M. H. Heringlake, sales, both of M. A. Delph Co., Fort Worth.

2. Mrs. Helen P. McGuire, associate editor, THE NATIONAL PROVISIONER, and Roland Sinclair, general manager, British unit of Kingan & Company Inc., Indianapolis.

3. R. W. Wilson and A. C. Wilson, director, Newforge Ltd., Belfast, Ireland.

4. O. G. Myhrman, superintendent, Elliott Packing Co., Duluth, Minn., and G. W. Freyler, a 57-year veteran, Rowlands Pork Products, Cincinnati.

5. P. V. Mayberry, superintendent, P. Conti & Sons, Inc., Rochester, N. Y., and Mrs. Mayberry.



get his help? Who are the people advising him? And I want to say in all fairness, I have seen this group at first hand and there are people of this belief attempting to guide his policies, and to swerve him away from a firm following of the straight line of American tradition.

Let's go on to the question of Mr. Stevenson's remedy for inflation, which comes down to the thing that I really want to talk about very seriously today. This is contained in his Baltimore speech. There isn't anything particularly new in this speech, because it is the straight Fair Deal-New Deal policy.

The prescription first is high taxes. This is placed on the very auspicious grounds of balancing the budget. If time permitted, I would like to talk a good deal about this point.

There is just one thing about the bookkeeping of the federal government I would like to mention in passing. There are two kinds of a surplus that the government can have. The first might be called a budget surplus; the other an executive surplus. The latter is the surplus the executive tells you that you have, and the other is a cash surplus. The difference is approximately \$4,000,000,000 that is paid into—through taxes—certain trust funds, Social Security and so on. Then it is taken and spent for various purposes, and I.O.U.'s are placed in the fund, so the fund is full of I.O.U.'s.

Discussion of whether that is a legitimate transaction or not is not our purpose. I do want to bring it out because it shows that many, many times the federal government is getting a perfectly adequate income when it has claimed that it is not. It uses the claim as the basis of the demand for increasing taxes. I want to say without going into this thing too much that I don't believe the last two increases in taxes were necessary at all.

I think one of the best things that ever happened for the economy of the country is the thing the Eightieth Congress is being denounced for—giving us a little bit of tax relief. What is happening, of course, is a constant demand for increased taxes so that taxes reach a place where they can be reduced if the foreign threat subsides. Then you can get money for all sorts of other purposes.

When we are talking about the federal budget and the stopping of inflation, I would like to ask why it is, since Mr. Truman went into office, the non-military appropriations or expenditures have increased from \$12,000,000,000 to \$20,000,000,000? Now, people always answer you by saying, "Well, you can't have anything because 87 per cent of the budget goes for present or future or past wars." That is supposed to shut you up.

You don't say any more. But, still, if you can struggle up and raise your hand and say, "Well, what about the 13 per cent?" That is supposed to be forgotten, but it is important.

There has been an increase of \$8,000,000,000 for all sorts of things, including relief, in a time when there was never a better opportunity for people to take care of themselves by getting jobs.

If you want to know something about relief, let me add this: In 1930, the federal government paid out for all assorted forms of relief, \$1,500,000,000. In 1950, in a time of high prosperity, it paid out \$15,000,000,000, a tenfold increase in 20 years. Where are we going to be 20 years from now?

These are the things that cause inflation and cause the



FRONT ROW: Martin Hirsch, vice president; M. S. Holstein, vice president; E. H. Oppenheimer, president; H. Barney, vice president, New York, and Cy. Fels, San Francisco, all of Oppenheimer Casing Co. SECOND ROW: W. F. Schluderberg, president, Wm. Schluderberg—T. J. Kurdle Co., Baltimore; Bob Levaco, Ralph Dickman, Herman Goldberg, and Steve Greenfield, New York. THIRD ROW: Samuel F. Faraone and L. A. Curran, Toronto manager. BACK ROW: Ed. N. Saad, Jack Becker and Joe Messing, all of Oppenheimer Casing Co.

destruction of savings and all of the things that go with inflation.

Now, another thing is the question of whether the government is spending the appropriations it already has. The last figures I saw indicated about \$150,000,000,000 has been appropriated by the federal government that hasn't been spent, and still they ask for more. All of this has to be overhauled, and I may say, overhauled by a rigorous advocate of good principles of finance and sound principles of economics.

So the first of the prescriptions of Mr. Stevenson is higher taxes. There is another one, and that is excessive private borrowing, that is, control of credit. Pass that over. It is important, but it has happened.

Finally, he comes to the matter of direct control on prices, wages and rent. Now, let me say that, fundamentally, and over-all, there is only one way to control inflation and that is to control the volume of money. This would control all prices and permit the processes of supply and demand to operate underneath a given quantity of money. Such restraint hasn't been used to any important degree and is not now being advocated.

We come to the question of direct controls and whether they can operate advantageously. Of course, everybody who talks about them says he doesn't like them. Mr. Truman doesn't like them, Mr. Stevenson doesn't like them, and that makes it unanimous. But then, some people go on and say what we have got to have.

The vastly important question that is left unanswered in these arguments for controls is whether the government intends to attack inflation at the roots, and that is to attack it by respecting the integrity of the Federal Reserve Board.

I wish that one or the other of the candidates would come out and say that, if elected President, he will not tamper with the Federal Reserve Board and he will not permit the Secretary of the Treasury to tamper with it. There is the real issue. That hasn't been mentioned yet,



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but we are getting a promise of continuation of controls with more inflexible enforcement.

I think it would be carrying coals to Newcastle to discuss the wretched history of price control in the meat industry. These facts are familiar to everyone here. Way back when President Truman restored meat ceilings in September 1946, the production of beef fell from 594,000,000 lbs. in August to 186,000,000 lbs. in September. Then, when an enraged electorate threatened to destroy Democratic control of Congress in October, these controls were removed and in November beef production went back to its previous figures again.

Over and over and over we have learned it is impossible for human beings to regulate prices. Because, as President Roosevelt once said, in the very early days of his regime—this was before the new philosophy began to take hold—the American economy is a seamless web. Whenever you touch it in one place, the entire structure is affected. When you try to control the price of meat, you are affecting the price of many other things.

He didn't say all this; he just used the expression, the "seamless web" to describe our economic situation, and it is a perfect description. I know it is perfect, because I wrote it in his speech myself! I may say I don't claim originality. It comes from a great history of the English law, and I don't want to take credit for it.

When you try to control the price of meat, you are affecting the price of many other things. This interconnection runs through all the economy and because that is true, the attempt of human intelligence to substitute itself for the operation of a free market ultimately results in frustration and precisely the opposite of what control is designed to accomplish.

Of course, all of this goes back to the question of whether people are to be trusted under a system in which they have a maximum amount of liberty to determine their own destinies. Again, I come back to what I said in the beginning, that the believers in control are the believers in the regulation of all forms of life. And so there has arisen in socialistic countries, including the left-wing of the United States, the substitution of the word "planning" for the word "socialism."

I was in England in 1950 and I listened to the labor speakers. I listened to Attlee one evening in Edinburgh. He didn't mention the word socialism. He was talking about planning. Yet, they were at that very moment manifesting the utter futility of the plan. There are some things that happened under this planning craze in England that are almost beyond human description.

Now, when are we going to identify this thing? I want to spend the rest of my time nailing it down and telling you where it came from.

The idea of economic planning for the state was first promoted in the First World War by a man named Walter Rathenau. This had its place in the over-all planning of the Germans in the First World War. Now, Rathenau's writings found their way into Great Britain and the United States. Hundreds of thousands of copies of the English translation of Rathenau were sold. The lessons found there were applied here in our own war economy by the War Industries Board in the First World War by our own Mr. Baruch. Perhaps that is the way to win a war.

But after the war was over and after the Russian



FRONT ROW: Ted Lind; Al Fonyo, vice president, and Bill Durling, president. SECOND ROW: Bill Zeitz, Irving Zeiler and Al Mills. THIRD ROW: C. A. Wood, Vern Berry and Phil Jones. FOURTH ROW: Ken Koepke, George Foster, Boyd McKeane and Frank Pemberton. FIFTH ROW: Earl Anderson and Don Johnson. LAST ROW: George Liddell, Irwin Martin and Bill Kimball, all of Wm. J. Stange Co., Chicago.

Revolution when Mr. Lenin found himself in power and had no plans, he said, and I am quoting him, "We need a plan at once to give the masses a shining, unimpeded example to work for." And he adopted and seized upon Rathenau's plan and adapted it to the Soviet economy, and after that, the Soviet economy has operated on the basis of one plan after another.

The idea of planning, of course, came to the British Fabian Socialists and then it got over here in the United States, and it is becoming quite a cult here. There is a professor of planning in the University of Chicago and his name is Rex Tugwell.

Planning would be impossible even if the most superior intelligences were to try to operate it, but if a brain is first-rate, it won't attempt it. Therefore, it falls into the hands of the fatuous and inexperienced individuals who believe that because they have never had any experience with the real, free market, they can enter it and subject it to their own calculations.

Over in Great Britain, where this thing has been shown to be one of the great fallacies of the ages, there have been various admissions by members of the Socialist government that ought to be suggested here. Let me give you two or three.

At the time when the Socialist government took over the fuel industry or the coal mines, the Minister of Fuel got up in Parliament and said—and this must have been good for his soul, it was a great confession: "I have been talking about nationalization for 40 years, but the implications of the transfer of property had never occurred to me." They first nationalized it and then thought about what to do.

The Parliamentary secretary of this man offered this following bit of nonsense. "It is not for me to say the precise criteria which should be applied to measure efficiency, but it is a subject which would repay thought, and

some of us are thinking about it." After they had seized the coal mines and had them in their hands and kicked out the former owners, then they began thinking about how they were going to run them. And, we have been carrying coals to Newcastle, literally, ever since.

Now, there you are. This is the picture of planning.

Of course, when a group gets itself into power, it will stop at nothing to perpetuate its power. Inasmuch as the economic life, as I have said before, is an integrated matter, it becomes necessary when you plan one part of that life to extend your planning to all parts of the life.

I am trying now to answer the point which is made again and again by British Socialists, that you can maintain all other freedoms and still control economic life. Now, can you? Ultimately, if you control crops, you must tell farmers what to plant, what not to plant, how much to plant and how much not to plant. That brings a further restraint by government, because when you tell people they must do something or not do it, you must provide a means of enforcement. For that reason, the Brannan Plan as embodied in a bill which was presented with the blessing of Brannan and President Truman, contained some 18 pages or so of sheer penalties, means of enforcement. In other words, when you start out to plan economic life, you ultimately plan and control all life, because coercion is indispensable to planning.

The planner must make people work where he decides they should work. He must determine what workers must do. He must direct the flow of income and the use of property. He must eliminate the consumer's freedom of choice. He must impose these restrictions on freedom or he cannot plan, for he is dealing with a complex and inter-related organism.

Ultimately, the planning must come to the regulation of peoples' personal lives. Prime Minister Attlee got up in the House of Commons, when he was Prime Minister in 1947, and admitted it in answer to the question as to whether 17 ministries had power to authorize inspections involving the entry into private houses and premises with-

out a search warrant. So finally, everything is planned, even the thinking of the people.

I want to conclude with one or two comments. When I brought out a book, which the presiding officer kindly mentioned, last spring, it was reviewed in one of our fancy journals of criticism, *The Saturday Review*, by a professor from Yale.

He liked my book pretty well, except the end. He said I had omitted something. Now, hold your hat. He said I had omitted something called economic "goalism." That is a new one to me! That is another word for planning, that is, to determine where you are going and move all the powers of government to get you there. It is a cast of mind.

When I came to the end of my book and tried to feel my way through the thing that was affecting our life and destroying our liberty, I wanted to paint a beautiful picture. I wanted to paint a picture of where we could get with liberty—what kind of a civilization we would have. After thinking about it a long time and talking to people, getting them to predict where we were going, suddenly the truth dawned on me. That is this: That you can't paint that picture in advance. You can't describe the goal, because in a free society national goals are not fixed by coercion. In Soviet Russia, they are fixed by the most active intelligence in the land.

All that we know and believe of freedom is that the nation is permeated with a million forces and the achievement is unpredictable. Therein lies the zest of anticipation, the zest of the quest. Fundamentally, as long as we are sure of the direction in which we are going and we are sure of the motives that are moving us and the principles that guide us, we can anticipate a better life. What that life may be, we have no right to describe. Just the assurance that we are moving forward is all that free men should ever ask and all that really free men have to ask. For democracy, as an old man in Indiana said some years ago, is not a place, democracy is a quest. That is the spirit of liberty.

And so, let's have done with those who would plan our future, those who would meticulously regulate our lives. When Edmond Burke was speaking in behalf of the American colonies in one of the most classic and memorable orations ever given, he said, "You must trust something to the spirit of liberty."

It is a trust that I think all politicians in all parties and all American citizens must have.

LEFT: Robert O. Hunter, Mrs. J. G. Lykos, Mrs. Robert O. Hunter, guest; John A. Heinzelman, jr., Mrs. John A. Heinzelman and John A. Heinzelman of the Buildice Company, Inc., Chicago.

RIGHT: Jack Adams, Cincinnati; Martin B. Clauser, J. T. Taylor Brokerage, Philadelphia; A. M. Follenweider of George Hollenbach, Chicago; Walter R. Nowe, J. T. Taylor Brokerage, Pittsburgh; Si Silverman, Saul Klein, Leo Wexler and Nathaniel Kamish, all of Silverman & Wexler, Inc.



Meat Industry Faces Hostile Public

ECONOMIST BUTZ SAYS MEAT'S PUBLIC RELATIONS HAVE
SUFFERED FROM GOVERNMENT'S WHIPPING BOY POLICIES



BUTZ

IT IS A REAL pleasure to meet here this morning with you folks.

The topic that George Lewis picked out of the half dozen I submitted to him—just one speech with six topics, you understand—was the topic of “Price Ceilings, Price Supports and Price Silliness.” That covers the water front. I am going to speak very frankly as an economist, and I want to be non-partisan. But that is difficult in times like these with a subject like this. I presume it best to tell you my political prejudices, lest you think I am critical of a particular party.

I was born and reared on a farm in Indiana in a family that was and still is very strongly New Deal. But I learned to read. That does not make me a Republican either! I cite that to illustrate that if I seem to be critical of some of the things we are doing, it is not being critical in a partisan way. After all, I am on the payroll of a large, state-supported university, but I am far enough away from my taxpayers today so I am going to say what I think. I say that knowing that in this audience there are some Republicans, some Democrats, some who no doubt belong to the party now in charge of the administration. I hope I do not offend any of you.

The topic, then, is “Price Ceilings, Price Supports and Price Silliness.”

I think they all tie in together. As you well know, in the last two or three years, particularly since Korea, food producers, food processors and food distributors have been made the political whipping boy of inflation.

We need not look far to find the underlying causes of the food prices we have experienced in the last two and a half years. We would find that it does not lie in the areas where attempts have been made to control it, but it is with all these good politicians who take a stand on the side of cheaper food. We are all conscious of any increase of food prices. We buy food so frequently. We buy other items less frequently.

In the first 12 months following the Korean war, the price of furniture in retail stores advanced more than the price of food at retail, but there was no political agitation to roll back the price of furniture because we

buy furniture only once in every ten years. Because few people are conscious of the price of furniture, there is no political capital in insisting on rolling back the price and making the manufacturers and retailers and distributors political scapegoats in our economy. But 153,000,000 of us, or that portion of 153,000,000 old enough to think, are conscious of a change in the price of foodstuffs. You can always make political capital and get a large following, if you are in politics or in government, by espousing the politically popular cause of cheaper foodstuffs for the masses.

That philosophy has cropped out often, of course, in the last dozen or 20 years, particularly in the last ten or 12 years.

I want now to come back more specifically to agriculture and food producers and processors and distributors. Those latter two groups include you packers. Of course, we are now in a quasi-war effort. We face questions of inflation, of taxation, of manpower, of controls, of price ceilings or price supports—I put those two together for I think they must be considered together. Agriculture, it seems to me, is at a crossroads in our political history. I think the agricultural and food industries are likewise at a political crossroads in our economic and political history. We must decide now if we want price ceilings and price supports, or if we don't want them.

Agriculture, we have pretty well decided, doesn't want price ceilings. Our farm organizations are positive on that point. Our food processors and food distributing organizations are positive. Farmers themselves are positive. I know of no segment of the food producing and processing industries that wants price ceilings. We have learned of the liabilities that go along with price ceilings.

We are at a crossroads and have to decide, it seems to me. Agriculture faces a hostile public and food processors and food distributors face a hostile public. Never before in the history of our country has the non-agricultural sector of our economy been so hostile toward the food and fiber producers and processors as at this moment.

It is not too difficult for me to understand why that is. When I place myself for the moment in the role of a

non-agricultural specialist, in the role of a consumer who buys food and fiber at what seems to be exorbitant prices, when I compare them with what they were ten years ago, I can understand.

I pick up the paper, on the one hand, and discover that at the last mid-month, by official figures of the Department of Agriculture, cotton at farm prices was selling for 114 per cent of parity. As a city person, I don't know quite what parity is. I have heard about it in recent years. I know that, somehow, the farmers' creed is faith, hope and parity, which leaves the greatest disparity.

I see cotton is selling at 114 per cent of parity, potatoes at 128 per cent of parity and I recall last spring when they got up to 180 per cent parity, you couldn't get any. Whole milk selling for 102 per cent of parity and beef cattle going for 114 per cent of parity; lambs 105 per cent, and veal calves 112 per cent. I don't look beyond that and see that hogs are something less than various other things. I see those figures going above parity and I pick up my newspaper in the last few months and I read that the "\$80,000,000,000 Congress" appropriated \$1,500,000,000 for agricultural activity of one kind or another. As a city person, I am not too sure what it is for except I realize I am paying it somehow or other.

I read in the paper that last year we spent \$240,000,000 for the United States Treasury to send checks directly to farmers in America for doing or not doing something, as the case may be, through the PMA. I read in the paper that when Mr. Truman submitted the budget to the Congress last June he asked for \$256,000,000,000 in the current fiscal year for the same thing. Then I read that the National Grange appeared before the Congress of the United States and recommended that that item be eliminated, with some adjustments. I read that the American Farm Bureau Federation appeared before the Congress and recommended that the sum be reduced to \$100,000,000, and then I read that the Congress finally appropriated \$250,000,000,000 to be spent for that purpose this year compared with \$240,000,000 last year.

It is hard for me to understand it. We have two important, powerful farm organizations, the National Grange and the American Farm Bureau Federation—two selfish groups, if you will, who represent an economic sector of our economy. They went to Congress and said, "Give us less money," and Congress in its wisdom said, "I'll give you more."

It is very difficult to understand how that works. Ordinarily, the pressure groups say, "Give me more," and Congress, being parsimonious says, "I'll give you less." In this case, the pressure groups said, "Give us less," and Congress said, "Doggone you, I'll give you more." It is difficult to understand it until you get into the politics of it and know that you have got to keep the PMA organization together. That now reaches out into every agricultural grass roots town of the country.

I am talking now as a city person who has developed a hostile attitude toward food producers and processors and distributors.

I see in the paper that beef cattle is selling on farms at 118 per cent of parity, and so on down the list. I see the money poured out of here for distressed agriculture. I remember somehow a couple of years ago we had thousands of cases of dried eggs that nobody wanted and somebody discovered that the South Koreans could eat



NED CONE, MANAGER, meats in can department, Rath Packing Co., Waterloo; John Moninger, American Meat Institute, and Ralph Keller, general manager, Chicago operations, Geo. A. Hormel & Co., Austin, Minn., display a brochure containing evidence of some of the early promotion done this summer on meats in can. Keller is president this year of the National Meat Canners Association. Moninger is secretary and Cone is chairman of trade committee.

them and we gave them away. A couple of years ago we spent about \$500,000,000 on a potato price support program to buy the U.S. No. 1 potatoes off the market, destroy them, so we could charge ourselves more for No. 2 potatoes and get them to the retail stores.

In another paper I see we are buying turkeys—I know that it is my money and I am a city person—to keep the price up. They are high enough already. I get mad, and city people are mad. I think we in agriculture have asked for a lot of the hostile attitude we have on the part of city people. I am convinced as I get around the country—and for a college professor I travel more than I should, and in the last year I have had audiences all the way from California to Maine and from Minnesota to Georgia—that never before has agriculture faced such a hostile urban audience.

We need to do something about it. I know you in the American Meat Institute are. We need to do something about it when we realize that in the last presidential election 22 per cent of the vote for president had RFD addresses and some of those were "windshield farmers"—they only live in the country. At the present time, 16 per cent of our total population in America lives on farms. Half of them aren't farmers; they don't think as farmers, they think as non-farmers.

Farmers are now a political minority and it is high time that we began acting like a political minority. It is high time that we educate the people in our industry—producers, processors and distributors—that we have to take a more responsible attitude toward the public welfare.

Are prices ceilings necessary? We all said, "No, we want to retain the fluctuation on this side of the market." The National Grange and the American Farm Bureau Federation have taken a courageous stand in favor of moderate levels of price support, in favor of flexible price supports, low enough to permit a maximum degree of price freedom in the market place. Those organizations should be commended for taking that stand when not all



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of their members go along with them, as various polls of farm opinion show at the present time. They deserve your support.

But, are price ceilings necessary on foodstuffs? Let's examine a few figures. Let's take the prices received by farmers in the United States for products. The prices reached a high in February 1951.

A few months after Korea, you will recall, we had an upshot. Your neighbors and mine went down and bought an extra sack of sugar, an extra automobile, an extra pair of tires. They were caught last time and they weren't going to get caught again. You and I didn't do that—we had more stability! But our neighbors pushed prices up for two or three months.

Prices leveled off in 1950. We discovered there was plenty after all. Then when the Chinese Communists entered the war in 1950, our neighbors went nuts again for a couple of months and prices went up in January and February of 1951. Now farmers are getting a price index of 313 and last month they were getting 288. Prices of foodstuffs are coming down.

Let's take the retail food prices. They reached a high in February 1951 when they went up to 226. They are now around 233 or 234. That is an increase of five or six points, an increase of 2 or 3 per cent. They have increased but they are relatively stable, you see, since that time.

What is happening in the meantime to wages of labor and those employed in manufacturing? Now we are getting down to pay dirt. In February 1951, they were getting \$63 a week; they are now getting \$67 a week. But prices reached a postwar high in 1948 and then slumped off. In 1948 retail food prices were selling at an index of 217; now the index is 233. That is an increase of 14 or so points, or 5 per cent. In the meantime, wages of laborers employed in manufacturing have gone from \$53 to \$67, an increase of \$14, and that is an increase of 26 or 27 per cent.

The plain fact is that food prices have gone up and other things have gone up, and so many more people in America have so much more money to spend than ever before that they are bidding prices up. Are they getting less meat? Indeed not. You are familiar with these figures. I want to cite briefly what is going to happen in the next year, using information put out by the government itself.

In 1952 we are going to eat 11 per cent more meat per person than we did in 1948, 9 per cent of it beef. There are 25,000,000 more people now, you know. We are going to have 23 per cent more pork per person. We are going to eat 69 per cent more chicken per person and 123 per cent more turkey. A lot more meat to eat per person than before the war!

Before the war, we spent 23 per cent of our disposable income for the food we ate. If we were content today to eat the same quantity and the same quality for the food per person, we could get it for 18 per cent of our disposable income. We are eating approximately one-eighth more food and better food than we ate before the war.

That leads me to observe that the thing wrong with America is not the high cost of living; it is the cost of high living. That is an important distinction. I would not change it for, after all, I live better than my father lived; my father lived better than my grandfather lived.

and I sincerely hope and pray that my two sons will live better than I have. Ours is that kind of a country—better and better. So let us not place the blame on the food producers and processors and distributors who have made it possible.

Food is cheap in America, in terms of the effort it takes to get it. There is no place on the face of the earth today where the working man spends so small a proportion of his working day on the food he eats. There is no country where the working man has as large a proportion of his working day left to earn the things that make life so pleasant. Food is ridiculously cheap in America and it has grown cheaper than it was a few years ago.

Just by way of illustration, last June—the latest figures I have—to get a pound of white bread, the American working man spent 5.8 minutes. In 1939, he spent 7.7 minutes. In July 1948, just four years ago, he spent 6.2 minutes.

Let's take round steak. We have heard a lot about that. Last June he got a pound of round steak for 40 minutes. In July of 1948, four years ago, it took 44 minutes. He got a pound of bacon in 1952 with 23 minutes of his time; four years ago, it took 34 minutes. A quart of milk delivered on his doorstep, he got in June for eight minutes of his working time; four years ago it took 11 minutes.

A few weeks ago, a friend of mine in Lafayette was complaining about the high price of milk, 22c delivered. I listened for a while and then he walked around the corner and bought a glass of beer for 20c. It costs 54c a quart after you blow the foam off, but that was all right with him. Then he walked across the street and he bought one of these bottled drinks of carbonated sugar at 23c a quart and that was all right with him. But 22c a quart for good, wholesome, nutritious, palatable, healthy milk, he was being robbed! Of course not, it was the cheapest thing he bought all day.

Somehow, in America we haven't got that story across to him. The politicians somehow are playing all the time on the theme we are going to get cheaper foodstuffs and the consumer gets the idea the food which he buys is expensive.

As a matter of fact, it is very cheap. No place in the world does he get it so cheap. The American worker gets his milk, as I said a moment ago in eight minutes, the Russian worker, if he can get milk at all, spends an hour and ten minutes. The American worker gets a loaf of bread in ten minutes and the Russian worker spends an hour and 18 minutes getting his. He spends so much of his day earning the bare necessities of life, he has no time left to earn the things that make life so pleasant. The American worker spends 32 minutes getting his pound of butter; the French worker, 146 minutes or two and a half hours, and the Russian worker spends nine hours—these are comparative cost figures. The American worker gets his pound of ham in 28 minutes, and the British worker, if he can get it on his strictly rationed system, spends 44 minutes getting his. The French worker spends 80 minutes, an hour and a third, getting the same thing.

Yet, somehow, people feel the price of meat is too high here. And it does seem high when you go down to the store and you see choice porterhouse steak selling for \$1.25, the center cut of ham for \$1.10. A city person, of



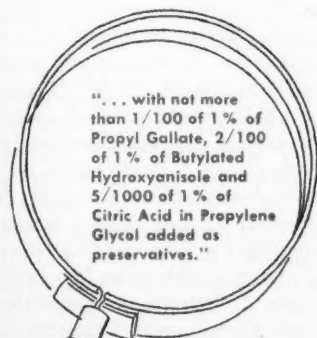
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"... with not more than 1/100 of 1% of Propyl Gallate, 2/100 of 1% of Butylated Hydroxyanisole and 5/1000 of 1% of Citric Acid in Propylene Glycol added as preservatives."

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course, may not be aware that the entire hog is not the center cut of the ham.

We must convince people that they set the price of that steak at \$1.25 and that price is about right. The American housewives have decided that \$1.25 is the right price for steak or they wouldn't pay it. If they aren't convinced, they can stop buying it and it will come down fast.

I can't feel too sorry for them getting proteins in the form of steak. There is no shortage of animal protein in this country, and if they can afford to get the protein at \$1.25, that is all right. In our home town there is an ample supply of cut-up dressed, good quality frying chicken at 60c a pound, and I get along pretty well eating fried chicken.

We come down to what is the problem in America? The problem we face is what kind of ration tickets we are going to use? If we are going to let somebody in Washington manipulate our price system, it is going to be done with another kind of ration ticket. We had experience with that during the last war.

You know, we always ration in our society. We ration everything we use. We use a ration ticket that looks like that, a \$1 bill.

I never have quite enough "ration tickets." I must decide, with the limited supply, whether I am going to buy a new automobile or a new suit of clothes or a vacation trip for the family. I can use my "ration tickets" any way I want to. That is my choice as long as it doesn't interfere with your business, and that means that "ration ticket" is a highly desirable item for me and you, too.

Our system is the strongest incentive man has ever devised to build underneath a productive and a strong and prosperous economy. I hope we never let the people you and I contact forget that economic and political fact.

In a free society, these "ration tickets" are given to you and me roughly in proportion to our contribution to society. If we want more, we work harder; if we want more, we produce more. If we want more, we prepare ourselves for a position of greater responsibility in our company, our university or our firm.

The other kind of ration ticket, the kind that comes from Washington, is given to you and me in proportion to how many children we have and does mother-in-law live with us.

In Great Britain and Europe, Great Britain particularly, there is a tightly rationized economy. The British worker can earn about all the British pounds he is allowed the first three days of the week—all that the government will let him spend. So why should he work the last three? We are not so far from that system here.

This "ration ticket" can be destroyed either by imposition from Washington of an arbitrary system of allocation and price controls, or the other just as effective way, by a destructive system of taxation. We are now at the point in this country where roughly one-third of our total national income is spent by governments.

I don't know just when we nationalized our income, but we are well on the road.

You can nationalize your society just as effectively by nationalizing income as you can by the government's taking title to your plant and your business. We don't have to take title to nationalize society. So, my plea then is, as we contact those whose thinking we influence, that we

never fail to emphasize that we must preserve this system that has been built within our boundaries—the strongest, the most powerful, the most productive, the highest living standard nation the world ever dared dream of.

The system works, let's keep it!

What can you and I do about it? Let's recognize the power of public opinion, and let each of us take upon ourselves the responsibility of becoming a professor of adult education. You and I are going to do the job. We represent the middle class of Americans. There aren't too many of us. We are the thinking class, and there aren't too many Americans who think.

Let's strive for a sound program, as sound a one as possible within the framework of political democracy. Let's recognize that, wherever possible, we must prevent the creation of a new governmental emergency agency because government emergencies never end; they mature into permanent arrangements.

Let's pull in America for a flexible farm program free from individual controls. Let's keep America working together, producing together, consuming together. Let's bring the people around about us back to the philosophy of an honest day's work for an honest dollar—and how far we have come from that in America.

Some sectors of organized labor say, "I will squeeze the goose and more eggs will come out somehow or other." The government says, "I will eat the goose and lay the eggs myself."

But, there are some of us in America—and I would like to include farmers and farm groups, and I know I can include you among this group—who believe that the way to get more golden eggs out of the goose over a period of years is to feed the goose. We must put a little fat on its back, plow a little investment back into it, let it eat an egg once in a while, too.

That is the system that gave us these golden eggs that we enjoy in this land of ours. That is the only system that is going to keep the golden eggs coming out of the goose, and let's teach our people that. Let's teach them somebody has to work, somebody has to save. We can't spend ourselves into prosperity. Inflation is not a way of life.

In agriculture, let's let our goal be expanding markets, not curtailed output. What a wonderful market we have ahead of us in agriculture. In the last ten years, we have increased our population by 20,000,000 people, one and a half times the whole population of Canada. We are adding to our population two and a half million people a year, a brand-new city the size of Detroit.

There is a tremendous market right at our back door in America. Let's send out and get that concept to your neighbors and mine, that we have got to produce for that. Let's stop trying to gouge each other into prosperity. It simply can't be done. Let's teach our people that the best self-interest for any group, whether they be farmers or laborers or meat packers or professors, is the promotion of the general welfare of the entire economy. When we approach any question involving our sector of the economy, we must ask, is it good for America?

As we approach these problems, therefore, my plea is that we approach them first of all as Americans, and then and only then do you and I have any right to think, to write, to speak or to act as a farmer, as a laborer, as a meat packer or as a college professor.

America Deserves Our Attention First

CONGRESSMAN WHITTEN WARNS OF
DEPLETION OF NATURAL RESOURCES



WHITTEN

I WELCOME THIS OPPORTUNITY of discussing with you some of the problems and conditions facing your government and I hope my discussions may help meet, in some measure, the need we all have for more and more facts about our government.

I have been chairman of the committee on agricultural appropriations for four years. During that time I have had that department investigated each year. I started the investigation with the Commodity Credit Corporation. We had hearings, we released our reports. The appropriations committee does not have public hearings. But, in connection with it, I want you to know that the Congress of the United States reflects the people at home. Don't think it does not. There are lots of people in the Congress that I do not agree with, but in most instances they reflect the views of the people in the district from which they come.

I have never been able to kid myself about everything's being black or white. I don't see any cure in these times. I can't see that the answer is so simple as some might think.

We, in this country, whether you like it or not, have a \$267,000,000,000 debt. It has to be met. If you ever let today's dollar buy what a dollar's worth 20 years ago did, you would be ruined, because you can't handle that kind of a debt.

On the other hand, if we don't balance the budget and keep a dollar where it is at least stable, we can become like China when I was there during the war. They quit printing \$10 bills because it cost more to print them than they would buy. You could make \$50 a day working in China and couldn't buy enough to eat.

That is one side of it. The other side is, if you turn back drastically and try to make your dollar buy what you remember it bought when you were a boy or a young man, how are you going to handle a debt of \$267,000,000,000?

In government we can do one of several things. We can try our best to run it economically, and I have tried to do that. I got through the committee, just before Congress

quit, another resolution requiring that all departments of government be investigated each year. It should save us lots of money.

What is this money being spent on? Highways, public health, schools—well, you say lots of it is going for foreign aid, economic aid. They spend it back with us. But, I think the key to our present predicament is the foreign economic aid program. I supported it for a number of years immediately after World War II but in recent years I feel that economic aid for those countries should be based upon good samaritanism—on the Christian duty and obligation—not on national defense.

There are lots of people who do not agree with me in this matter.

The majority of the members of Congress have supported foreign aid for every country whose name you can think of, unless they have refused it.

We spent \$14,800 on the rehabilitation of one family in one country. Yet, as we come up to this presidential election, we must realize that if a majority of the Congress has supported those programs for foreign countries, how can they consistently turn the American Meat Institute and its members down when they want more appropriation for inspection service, or when somebody wants an appropriation for something that means something to them? It is mighty hard to hold down on the home people when you have voted for foreign aid to the extent that we have.

I have been opposed to the fact that we have not had sound financing in this government. I have been opposed to some of the free spending that is going on in this government. I have been the author of numerous amendments which have reduced the spending. I cut the foreign aid program 15 per cent a few years ago; wrote a provision in the foreign aid program this time, requiring payment of American prices.

I have sat on the appropriations committee for 11 years, and if there is any crowd that resents your asking about where the money is coming from, it is the military. If there is any group that has any more waste, it is the military.

I think we should realize that in this country we have

spent too much time finding fault with too many things. If I were going to try to give advice after my two very distinguished predecessors, I would say we must keep a sense of balance.

We do have a great country. The people are living better than ever before in history, and they are living under a system where to work has been to earn and to save, to have a reward.

We have found if capital is not available through other sources, then through the various governmental agencies it can be made available. But, we have found it so easy we may overdo it.

In our country, as I see it, we should first cut our foreign aid. The minute we do that we can balance the budget.

Let me tell you a little something about the day-to-day operations of Congress. A few years ago we had in the Congress what they called a joint committee on the budget. It was made up of the members of our appropriations committee in the House and Senate, the finance committee of the Senate and the ways and means committee of the House, 104 members. That was shortly after the war began in Korea.

I offered a motion before that joint committee to take 5 per cent of the national income and apply it to payment of the national debt—the principle. I got the votes of every single Republican, but they were in the minority, so I lost. In the Eightieth Congress we had the same committee and I offered the same motion and the Republicans were in control and I got the vote of every single Democrat and lost every Republican and lost the vote.

So, don't think that one party or one party label or one individual has any cure at all.

We are not going to cut down things too much. You can't afford to, whether you like it or don't like it. About 85 per cent of your expenditures are in national defense or in connection with veterans and with other such things, and whether you should or shouldn't, you are not going to cut that. My statement is based on 11 years of experience.

If you have a fixed volume of 85 per cent of national expenditures under present conditions, you had better watch trying to get that 15 per cent reduction. You may end up with some reduction in the national expenditures, but a tremendous reduction in your ability to pay the tax bill, because if the national income falls off, then your ability to pay falls off with it.

Much has been said here about agriculture, and I want to take up the remainder of my time, if you will bear with me, on one other thing I think I should tell you.

You know, you can get to be a fanatic on most any subject if you study it. I was born and raised on a farm and then studied law. Then I set out to learn more about agriculture and get into it. I represent an agricultural district in northern Mississippi. I represent the milk sheds and cattle farms and diversified farming country. But, as you study you can begin to realize that throughout the history of our country, we have been shortsighted. Our country, in its short history of 175 years, has wasted more natural resources than any country that ever existed.

We started off with 500,000,000 acres of good, fertile soil and it is down to 300,000,000 acres. You say that it is the farmer's job to look after his own land. But if

farmers don't, aren't the rest of us dependent on what he grows from that source?

I have been in China and other places—practically every country we are helping. Behind them is a depleted soil structure, barren of natural resources.

I am just as disturbed about socialism in England as our friend Dr. Moley, but the basic trouble beyond that, in my judgment, is they do not have the raw material. You can go beyond what they have got—any socialism, monarchism, anarchism and whatever it is—and they still have not got the raw materials.

In our country we have awakened to the fact that we have been depleting our soil and letting it wash away. If you don't believe it, look to the hearings where I sat on the committee the last two years. We did the best we could to get the government to relieve the situation that had developed from the floods in Kansas and Missouri. We spent \$60,000,000 and authorized borrowing of \$70,000,000, but the people suffered \$2,000,000,000 in losses.

Every day in the city of Memphis, Tenn., there flows out to the sea down the Mississippi, the top soil of 50 40-acre farms.

We have a population of 155,000,000 in the country. A 10 per cent increase every year is a lot bigger increase than 10 per cent of 30,000,000, back when we didn't have enough people.

We have a problem of providing for the future by giving attention to the soil of this country. You say it is not the federal government's job. It isn't. I have heard the farm leaders. They came before me and advocated \$6,000,000,000 for foreign aid, but no substantial assistance to the American soil. I don't believe in that. Maybe we have got to do this thing on foreign aid, but if we have to cut, I think it should come out first from foreign aid.

In the last 12 years we have asked American agriculture to produce 20 per cent more, and they have done it. When you produce 20 per cent more from your soil, is it time to give less attention to putting things back in it, or is it time to give more? I know lots of farmers who don't want to follow a soil conservation program because it is hard labor. Those farmers were the ones who were wont to let it run down before. They have always been with us. But I know some of the finest farmers in the country, who do not let their farms run down. But if they do it affects all of us.

I think we need to give attention to America first. I think we need to give attention to agriculture.

There are lots of people who find fault with the price support program. Someone here said he favored flexible supports. Flexible is a wonderful word; it sounds so nice. It sounds as though it would stretch when you need it and contract when you don't. But, it is the opposite. If there is a shortage of supply of a given commodity, the farmer gets 90 per cent of parity. But, if there is a shortage of supply and there is a market, he doesn't need any. If there is a surplus and no market and the farmer needs it badly, we give him 60 per cent of the parity. Is that helping the farmer?

Under the International Agreement, supported by both parties, we were giving foreign countries the right to buy our wheat and then selling it below cost and making up the difference under Section 32. I was responsible for the provision in the last Congress, requiring they pay American prices if they have our money to buy it. I

directed the committee to take that money and buy food for the school lunch program.

We get lots of demands in Congress. In spite of the complaints against us as a group and the criticisms of the appropriations, we fulfill one-half or one-third of the demands which are made on us.

We have a great country. We have a great American agriculture. I am asking you to support people in the Congress who stand for taking care of it. We don't need flexible supports.

I was in Congress when the Aiken bill was passed. It provided flexible supports. The sponsors were beaten in the next election. But the Eightieth Congress didn't do anything to repeal the minimum wage law or repeal the tariffs. If you are going to have industry protected on tariffs and going to have wages protected with the power of the labor unions and with a minimum wage law, you are either going to have to put some support under the price of raw materials or else the high price of the others is going to run them right down into the ground.

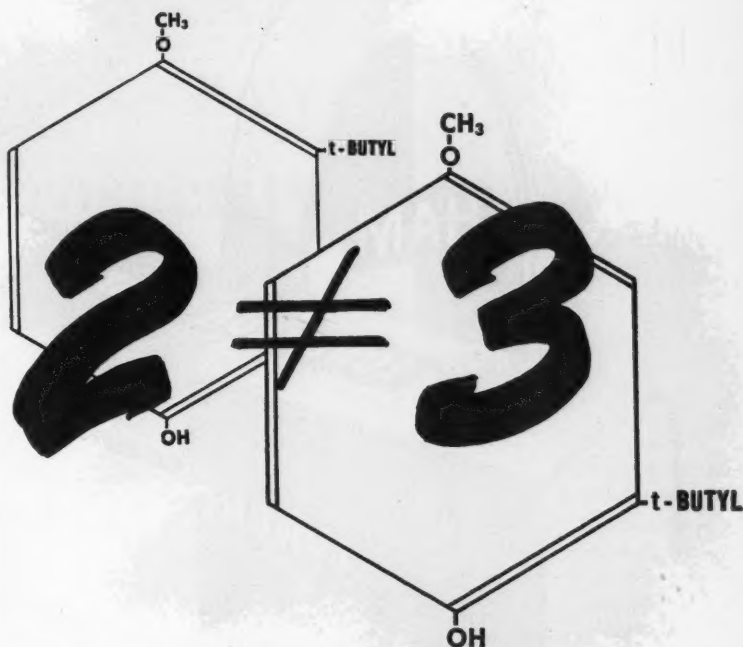
The history of this country shows that the reason we have exhausted our soils is largely because agricultural prices were so low that farmers have had to deplete the soil to make a go of it.

One hundred per cent of parity is nothing but an assurance that we are giving farmers what tariffs and what minimum wage laws do—assuring them 90 per cent of the comparative purchasing power they had before World War I.

You don't have to make any apologies for that. You can't protect the two major elements of your population without giving a little attention to the third.

This is your problem. You have got to give attention to price controls in the Congress. We are living better than ever before in our own country. If we can find a solution to our Korean problem, keep a sense of balance and realize no party is going to be the complete answer but that it takes the cooperation of all of us, including the way you run your own business, we will be all right.

We as a nation must do everything we can to preserve our American system. That is largely up to the Congress, but you can also do your part in standing for what you believe to be a sound government.



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Free Economy Is Key to Prosperity

SENATOR AIKEN SAYS WELL-ORDERED PROGRAM FOR AGRICULTURE SERVES INTERESTS OF COUNTRY



AIKEN

I AM HAPPY to be here this afternoon. No one could occupy a position on the Senate agriculture committee very long without recognizing the great importance of your industry both to the consuming public of 160,000,000 people and to the 6,000,000 families who live on American farms.

Probably no industry has developed the processing and distribution of food products to a more scientific degree than has the meat industry. The influence you wield in the field of agricultural prosperity can hardly be exaggerated. You must shoulder much responsibility not only for the health of the people, but for the health of the national economy as well.

The subject you have given me today, "A Constructive Program for Agriculture," is one with which I have been concerned for a long time—even before I became a member of the United States Senate.

There are still a few people left who say, "Why should we have any agricultural program at all? Why not leave this field completely to the law of supply and demand and individual competition for all?"

These questions were pretty well answered during the years of the early 1930's. At that time, most everybody came to realize that in an economy so vast and intricate as ours, a coordinated and well-ordered program for agriculture was in the interest of everyone.

We learned what a collapse of the farm price structure could mean to the national economy. We found that when one segment of our economy broke down, all others inevitably followed. Without purchasing power, farmers, who buy twice as much industrial output per capita as the general public, could not purchase the goods of industry. Without farm sales, industry could not give full employment. Without employment, working people could buy neither the output of agriculture nor industry—and a vicious circle became worse.

In fact, if we study our history thoroughly, we will find that for centuries the strength or weakness of a nation largely depended upon the condition of its agriculture.

A constructive farm program should have three main objectives: 1) To balance production so as to provide

enough food and fiber for our consumer, industrial and export needs; 2) To prevent another farm-led depression, and 3) To assure the farmer of his proportionate share of the nation's economic prosperity. And these programs which we devised must not only take into consideration the years that are with us and the ones immediately ahead, but as Dr. Gustavson said last night, we have to look to the future when we will have a greatly-increased population to feed in this country.

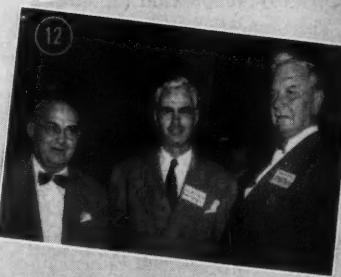
We know that excessive surpluses or acute shortages of food and fiber can make trouble not only for the producer but for consumers, processors and distributors as well.

During the last three or four years, there have been several proposals for ending all farmer and consumer troubles. There was the much publicized plan which we were told would provide plenty of cheap food for consumers and high income for farmers without costing anything. This was just a bit of Utopia itself—Utopia which men have been seeking for thousands of years. I understand this is a non-partisan group. But, sometimes I wonder how I am going to tell the truth without seeming to be partisan, and I just want to point out this little Utopia plan providing consumers with cheap food at high prices at no cost to the taxpayers is still one of the platforms of one of the great political parties today.

There have been proposals to guarantee farmers 100 per cent of parity prices for their commodities, although the sponsors of this have not claimed it will be entirely free to all. Then there are periodic suggestions that a two-price system for the various farm commodities would do the trick.

There have been innumerable other proposals for solving the problems of the farm people. Some of these contain suggestions which merit consideration, while others might be classified as being the "screw ball" type. Unfortunately, most of the cure-alls for our agricultural problems involve government controls and police action to a greater extent than we have seen so far.

I will say, frankly, that I am opposed to any farm program—no matter how promising—which involves the subservience of the American farmer to the state. There is, however, no need for the adoption of any questionable farm policies.



BETWEEN SESSION LULL

1. R. E. Brickman, C. J. Brickman and A. W. Brickman, Illinois Meat Co., Chicago.
2. George J. Buchy, Ben F. Brinkman and Edmund Buchy, vice presidents of Chas. G. Buchy Packing Co., Greenville, Ohio.
3. Robert Veverka, beef superintendent, and J. A. Butorac, casing superintendent, both of Geo. A. Hormel & Co., Austin; C. R. Vann, Ohio Natural Casing Co.
4. N. S. Bangs, Mrs. Smith and Lowell W. Smith, Western Buyers, Algona, Ia.
5. Alfred Jacobshagen, president, Alfred Jacobshagen Co., Chicago; Ray S. Paul, vice president, Rath Packing Co., Waterloo, and Fred Locke of Jacobshagen.
6. R. A. Peters, Fred Bauer and Bob Petz, Peters Sausage Co., Detroit.
7. Fred Foster and Owen Limberg of American Stores, Philadelphia, and H. J. Williams, vice president, Wilson & Co.
8. Joe Davis, Griffith Laboratories, Chicago; Al Roth, purchasing agent, Krey Packing Co., St. Louis, and F. W. Griffith, Griffith Laboratories.
9. Ted Ettlinger, R. Ettlinger & Sons, Chicago; L. W. Brandt, manager, vacuum cooked meats, and K. C. Behm, casings and dry sausage, Cudahy Bros. Co.
10. Paul Jones, vice president and sales manager, Hammond, Standish & Co., Detroit; Ray H. Brown, Sunderland & DeFord, Chicago, and Leo Tochman, district sales manager for Hammond, Standish.
11. F. E. McCarthy, assistant sales manager, Ottumwa; J. A. Weber, manager, Chicago office, and C. B. McClelland, assistant manager, John Morrell & Co.
12. Karl Morgan, sausage department manager, Midwest Provision Co., Madison, Wis.; John R. Galloway, sales manager, Bookey Packing Co., Des Moines, and Arthur W. Betts, president, Smoked Foods Research Institute, Palisades Park, N. J.
13. Karl F. Voigt, vice president and manager of Estherville plant, and C. C. Pierson, superintendent, both of Tobin Packing Co., Estherville, and W. W. Bystedt, Food Management, Inc., Cincinnati.
14. J. H. David, R. W. Pouk and J. J. Tierney, Armour and Company, Chicago.

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MEAT INDUSTRY SUPPLIERS

CREATORS AND MANUFACTURERS OF FINE FOOD SEASONINGS

(AIKEN from page 211)

In 1948 I was chairman of a Senate subcommittee which studied the trends and needs of American agriculture. From that study we evolved a program which, as slightly amended in 1949, is adequate to meet the needs of American farmers for some time to come. That is, it will meet the needs for the foreseeable future if it is carried out as Congress intended.

The American farmer has been relatively prosperous for over ten years, reaching the peak of his prosperity during 1947 and 1948. Programs which were evolved during the 1930's, such as development of the parity formula, the REA and soil improvement activities, have contributed materially to this prosperity. Farm credit facilities, established between 1916 and 1933, have also played a part.

The Second World War, which provided a market for surplus carry-over commodities, as well as for current production, also contributed immensely. And then, as mentioned by Dr. Gustavson last night, increasing population of the country is bound to increase the need for farm commodities.

The real foundation for modern farm prosperity, however, was laid by those scientists and research workers who have revolutionized production, processing, marketing and transportation methods. Research and development is the solid core of our agriculture expansion. Police action is no substitute for discovery. Political domination can never take the place of the microscope and the test tube. And I see in the audience, Mr. Thomas Wilson, who I think is one of the most highly respected men among the farm people and the farm youth of America, and I want to point out that extension service and the 4-H Clubs have probably contributed more to the expansion of American agricultural production and to the better living among American farmers than all the police action and political domination could ever hope to do.

At the time we made our agricultural study in 1947 and 1948, there was little indication of shortages. At that time, we anticipated surpluses and we had to consider how such surpluses could best be handled.

The idea of restricting production, which would entail quotas and penalties, was objectionable to many of us. Restriction of production would actually reduce rather than enhance farm income. We believed that if the animal industry of America could be expanded and a greater part of the enormous grain crops which we were producing marketed in the form of animal protein, such as milk, eggs, beef, pork, etc., that we could achieve a most desirable objective. The people of the country would eat better. Our acres would become more fertile rather than impoverished. The market for grains would be substantially increased and a great deal more labor would be furnished for our working people in the fields of processing, transportation and distribution.

It is a well known fact that when folks have good incomes, they buy more meat. Therefore, it may be argued that conversion to an animal industry would be of little value in times of recession. Conversely it will be plain that an expansion of animal industry will do much to keep us out of economic trouble.

All through our investigations we had this aim in mind—to develop the means for preventing depressions rather than methods of extricating ourselves from them.

Although we realized in the spring of 1948 that an expansion of the animal industry would be desirable, the obsolete parity formula which used the years 1910 and 1914 as a base period provided no incentive at all for conversion to meat, poultry and milk production. In fact, most farmers couldn't produce these animal products for 100 per cent of parity based on the old formula.

That was why we worked out the modernized parity formula which puts animal products in a much fairer price relationship to other farm commodities. We did away with the old 1910-1914 period and used the latest ten-year moving average as a base, thereby automatically keeping the formula up to date. This formula, in short, would make it more profitable to sell grain in the form of animal products. It would reduce the parity price of wheat and corn somewhat and increase the values of animal commodities. Members of Congress from the wheat states, cooperating with those from certain cotton growing states, have had the votes to postpone the operation of the modernized parity formula until 1956. They had some justification for doing this inasmuch as the Secretary of Agriculture has requested the wheat growers to produce price breaking surpluses. And unless we have world war, which we all hope we will not have, we appear to be heading for certain trouble with the wheat surplus which the farmers of this country have been asked to produce. It is undoubtedly going to reach a peak of six hundred million bushels by the first of next July and somebody will have to take a licking on it unless we get into another large-scale conflict.

If we can once get this country back to a point where we have full government by law, and not of men, then the formula worked out by the Congress in 1948 will be found a perfectly fair instrument for determining the price relationship among different commodities. Another main point in the farm program worked out in these years of 1948 and 1949 related to price supports.

Price supports are nothing new—any more than our quotas and price ceilings. They have been with us hundreds of years. They have been tried out by a lot of countries and a lot of governments that fell. Go back into history and you will find that for centuries incentive prices have been offered for the production of certain crops. Price supports are intended to protect not only the farmer but the public as well against collapsing economy. When a minimum price of 45c a bushel was established for corn in the early thirties, national recovery from the great depression got underway. The price support legislation of the thirties was emergency legislation. It provided only supports which would take effect after the price structure had collapsed at 52 per cent parity. Our job was to find a means for preventing price collapses rather than effecting recovery after depression had taken place.

There is a good deal of opposition to any farm price support at all. This comes from consumers, dealers and many farmers themselves. However, I do not believe we can have a really constructive farm program without provision for price supports when needed.

We are only looking for trouble, however, if we rely upon supports, controls, quotas and penalties as the first-line of defense in maintaining a prosperous agriculture.

In 1948 we wrote a provision for price supports into the law and amended these provisions slightly in 1949. The Secretary of Agriculture was given authority to fix

the level of support for basic farm commodities between 75 and 90 per cent of parity, according to the size of the surpluses. He was given authority to correct inequities. He has power to increase supports above 90 per cent when necessary to secure adequate production.

He can support the price of perishables and other non-basic commodities, except potatoes, at levels ranging up to 90 per cent under certain conditions.

I have heard it said that the Secretary should be given authority to support hog prices so that a sharp break such as occurred early last spring could not happen. The Secretary did have full power to sustain hog prices last spring under the 1948 act, but he did not exercise that authority until the price had broken and thousands of farmers had sold brood sows due to farrow.

That is why there will be fewer hogs marketed this season. If there is a shortage of pork this coming winter, as some have predicted, it will be due to an error of judgment and not because of inadequacy of law—because the law was there, giving the Secretary the right to say we are going to buy so much corn. He did say it after the price was broken. He could have maintained the price if he had exercised the provisions of the law.

We provided for a good workable price support program. At any rate, like the new parity formula, it was supported by every major farm organization, by the United States Department of Agriculture and by the President of the United States, who time and again told the country and the Congress that any price support program must have flexibility. And as late as June 1952, the Materials Resources Commission appointed by the President himself, came out very strongly in favor of the type of farm program which we put on the legislative books in 1948 and 1949.

It is only from political expediency that some of those who supported the Senate agricultural committee in 1948 have now taken a different position. When I read in the daily papers of the President's whistle stop trip through the West, I find myself simply disgusted with some of the remarks he is making. They are not in accord with facts. And the Secretary of Agriculture today, and I would say

this if he were a Republican, is bombarding the committeemen of this country, 95,000 of them, with misleading and false propaganda. Ninety-five thousand of these people are receiving memoranda from the Secretary of Agriculture today which put the facts in an awkward position.

I have carefully read lately the agricultural planks of all the major political parties in the United States and I find in one of these planks a lengthy dissertation, or whatever you call it, on what they will do for the farmers, but read that carefully, forward, backward, start in the middle and read both ways, and you will find not one instance in it where there is any inference that the farmer himself will have a thing to do with initiating, formulating, or carrying out farm programs. The nearest we can come to it is in one paragraph where it says, and I quote, "We will continue with the widest possible farm participation after the programs have been initiated and developed under the administration."

Nowhere will you find any inference that the farmer is to do anything for himself. Who is to do it for him? The party. In other countries where the parties have done that, what has happened to liberty and independence? I am just showing you how far we have come and gone in that direction.

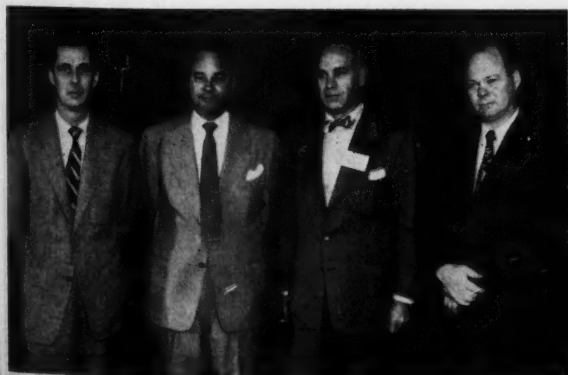
For four years, they have been offering the American farmer a high, fixed level of support in return for his independence. What they really want is political control over agriculture. They know that once the farmer exchanges his independence for government promises, his political freedom is gone. The wheat farmer averaged 81 per cent, the tobacco farmer in the East got 71 per cent for his crop, the peanut grower in the South was getting 77 per cent for his crop, that is the national average, some got way below that, and yet they were all guaranteed 90 per cent, but they didn't get it.

I don't want the farmer to get only 90 per cent of parity for his production. I want him to get 100 per cent of what he earns. I want him to get it as a free American citizen. I am convinced that this objective is possible of achievement.

Price supports are not a substitute for fair returns in the market place, nor do they guarantee the farmer a decent income. The fact that our farm price level stands at a little over 100 per cent today is due to the good prices received for non-supported commodities.

To maneuver the farmer into the position of relying upon the federal government for high, rigid price supports

LEFT: Harry G. Murphy, M. A. Foran, H. R. DeCressey, and Bob Lindahl, all of Milwaukee Spice Mills, Inc., Milwaukee, Wis. RIGHT: Harold L. DeFord and Roy H. Brown, both of Sunderland & DeFord, Chicago; Robert L. Fletcher, Oscar Mayer & Co., Madison; Jim Hogan, Sunderland & DeFord; Arthur Nalick, Nalick Meat Co., St. Louis; Arnold Tellen, Tellen Inc., Chicago; John A. Willett and John I. Cole, Oscar Mayer & Co., Madison.



not only would place him in an economic strait-jacket, but would also make him vulnerable to the price controllers who, judging by what has happened this year, would impose ceilings on farm commodities at 100 per cent of parity.

This would mean the end of the free market in this country. Government, and government alone would be the only dealer in 100 per cent supported commodities.

Price ceilings, at best, are but an attack upon the symptoms of inflation. They do not get at the underlying causes, as do regulation of credit, regulation of the money market, economy in public expenditures and similar basic brakes upon inflation at its source.

A glaring example of what can happen when ceilings are imposed at 100 per cent of parity is the potato fiasco of this year. The price of potatoes had been well below parity for a number of years; 60 per cent supports had virtually pegged the price to that level. Last winter, because of a 1951 crop closer to the demand level, the price rose to 105 per cent of parity. OPS almost immediately slapped on a price ceiling at 100 per cent.

This gave farmers no opportunity to make up the losses they had suffered in previous years, nor did it prove an incentive for Southern growers to plant enough early potatoes to relieve what otherwise would have been only a temporary shortage. Farmers would not plant an adequate new crop of potatoes on a "heads I win, tails you lose" basis with the federal politicians.

Congress stepped in and outlawed price ceilings on potatoes and other vegetables and fruits, in order to encourage adequate production. The action came too late, however, to prevent a shortage for this season. The day Mike DiSalle imposed the ceilings, I wrote to him and told him he had taken the one step which would absolutely guarantee a shortage of potatoes. He wrote back a nice letter that didn't say anything and he didn't do anything. The housewife can thank the federal blunderers for the scarcity and high price of potatoes today.

The fallacy of depending upon price ceilings to control inflation is illustrated by the potato fiasco, particularly because of the adverse effect it had on production, which is the best antidote for inflation. When the Congress authorized price and wage controls in September 1950, it

prohibited roll-backs. That is why the livestock producers and a few other farmers have been able to get good prices up to date. That is why agriculture as a class is able to achieve 100 per cent this year. It is not because the price controllers wanted them to get good prices, but Congress at least had enough foresight to prevent OPS rolling back the price beyond the June 1950 level.

Before concluding, let me say that no farm program can be any better than the manner in which it is applied. We had a good deal of trouble in this respect during the last three years. I sincerely hope this trouble will be eliminated in the near future. The farm program which we so carefully worked out frequently has been misinterpreted and misrepresented before the farmers of this nation and before the farmers of the State of Illinois.

In 1948, high officials of government, including the President and the Secretary of Agriculture, misrepresented the grain shortage situation. This resulted in unduly depressing the market for grains that year.

More recently, the Senate agriculture committee has held hearings on grain storage scandals. We found that government was doing business in a manner which no well-ordered private concern would approve of or could even exist under.

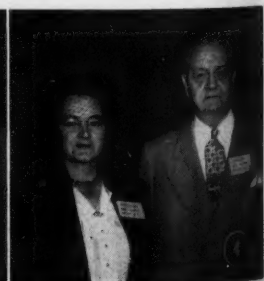
The unbusinesslike methods referred to included: Failure to inspect the quantity of grain stored for the Commodity Credit Corporation; failure to inspect facilities used for storing grain; lax inspection of the quality and condition of grain; failure of the government to take action to prevent grain from spoiling; CCC toleration of delay, involving months in some cases, by warehousemen in honoring loading out orders; failure by CCC to make proper and adequate investigation into the financial condition of those with whom it made contacts; acceptance by CCC of low and inadequate surety bonds posted by storing companies; toleration of gross overloading of storage facilities; payment for storage of grain which was not actually stored, and payment for services not actually performed.

These are but some of the methods of operation by CCC which resulted in loss to the taxpayers. How long could any of you stay in business with such methods?

The Secretary of Agriculture asked us why we made such a fuss over the \$10,000,000 worth of stolen grain. Why didn't we think instead of the hundreds of millions of bushels that weren't stolen? This is in line with the attitude of those officials who actually seem hurt and indignant because Congressional exposures have resulted so far in firing 174 officials of the Internal Revenue Bureau. They say we should concentrate our thoughts on the 55,000 employees who have not been fired.

With that type of thinking in Washington, we can never

1. George Albert, president, Albert Packing Co., Washington, Pa., and son, Alphonse, vice president.
2. Mrs. and Edgar Taylor, assistant secretary and treasurer, Roegelien Provision Co., San Antonio, Texas.
3. Mrs. and William Greenhouse, president, Pilgrim Packing Co., Syracuse, N. Y.
4. Mrs. and Fritz Hahnel, sausage superintendent, Keras Sausage Company, Buffalo, New York.



hope to get full value out of any farm program, or any other program for that matter.

I believe that the Congress has laid the foundation for a perfectly sound and workable farm program, but until its administration can be freed from exotic political philosophies and it is applied with a recognition of facts as they exist and with good business judgment, the fullest beneficial results cannot be obtained. I would like to see government run as efficiently as the meat industry is run today. Perhaps that is a forlorn hope, but it is worth trying for.

Finally, let me say that basic to a constructive program for agriculture is the preservation of the farmer's freedom, and the maintenance of his dignity and self-respect as an American citizen. There are many pitfalls upon which farm prosperity and independence can flounder and crack up. The farmer needs to beware of promises of short-time gains by those who would dominate and control him.

A constructive program should not depend on political domination and government checks but will aim at full value received in the market place. Just as the meat industry is a strong proponent of the free enterprise system, so is the farmer. I quoted from one platform, the farm plank in it, without mentioning a name. May I conclude by quoting from another: "A prosperous agriculture with free and independent farmers is fundamental to the national interest, and that must be the aim of a constructive program for agriculture." His welfare is linked with your welfare. Prosperity in America is the goal of all segments of the economy—industry, agriculture and labor. To help agriculture achieve lasting prosperity, along with the rest of the economy, is the permeating objective of a constructive farm program.

1. Bob Epstein, vice president; Siggie Wolf, Chas. Cox, Martin Heiman and Mrs. and Mr. Harry Pett, all of First Spice Mixing Co., Inc., New York.

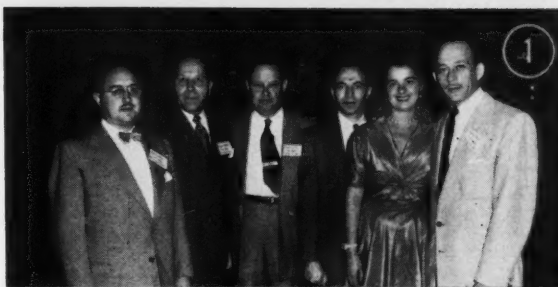
2. Robert Munnecke, president, The P. Brennan Co., Chicago; Frank Ballester, vice president, Ballester Hermandos, San Juan, P. R.; S. M. Washer, president, John Thallon & Co., New York; John Felsen, F. B. Cooper Co., Inc., New York; Ken G. Campbell, production manager, O'Sullivan Bros., Sydney, Australia, and Wm. O'Reilly, sales, John Thallon & Co.

3. Capt. H. S. Dobbie, Quartermaster Market Center, Chicago; A. R. Current, general sales manager, City Products Corp., Chicago; Lt. Col. A. D. Hall, Quartermaster Market Center, Chicago; Geo. L. Hancock, vice president and general manager, Tulsa Cold Storage Company, Tulsa, Okla., and H. W. Summer, general manager, Federal Cold Storage Co., Kansas City, Kansas.

4. H. J. Addison, sales manager, H. J. Mayer & Sons Co., Chicago; Frank Linggi, Pureta Sausage Co., Sacramento; S. A. Mayer, secretary, H. J. Mayer & Sons Co.; A. D. Mace, Humphrey Mace Meat Co., Dixon, Cal., and E. S. Holmes, president, John R. Daily, Inc., Missoula, Mont.

5. Martin Hirsch, vice president; M. S. Holstein, vice president; both of Oppenheimer Casing Co., Chicago; Frank Batek, casing sales manager, Armour and Company, Chicago; E. H. Oppenheimer, president; Cy Fels, vice president, San Francisco, and S. L. Faraone, sales promotion manager, Chicago, all of Oppenheimer Casing Co.

6. R. P. Laeuffer, plant superintendent; Harold Cummings, sausage superintendent; Leo Accountius, killing foreman; Paul Shutt, boning room foreman; D. O. Rex, plant engineer, and Roy D. McClain, sales manager, all of Lima Packing Co., Lima, Ohio.



Optimism for Free World Grows

EDITOR COWLES BELIEVES THIRD WORLD
WAR APPEARS MUCH LESS LIKELY TODAY



COWLES

GENTLEMEN, I AM very proud to be asked to speak here this morning. I have many friends in this industry. Having been born and reared in Iowa, I think I know a little bit about some of the problems of you people in the great meat packing industry.

I want to talk about world conditions as I view them, and I am an optimist. I think too many American businessmen today are too confused about world conditions, and too pessimistic about them.

If you will look at the world in perspective and think about where we were three or four years ago, I think you will have to come to the conclusion that our side has been making remarkable gains.

Late in the spring I visited Asia. I went to Japan, I went to Korea, I went through the front lines in Korea and I went up to the truce talks at Panmunjom. I went down to Formosa, to see the Chiang Kai Shek's, and look at the Chinese Nationalist troops being trained there. I then went through South Asia, India, and doubled back through the Philippines, and just last month I came home from a similar trip through Western Europe.

I think that the thing that impressed me most on this trip was the fact that not a single statesman, not a single official of any of the countries that I visited, and not a single general, either in the Orient or in Western Europe, feels that the third World War is coming in the foreseeable future.

I happened to be in Western Europe and in Germany four years ago. You will recall that four years ago today we were in the midst of the Berlin airlift. At that time, a majority of the top statesmen in Western Europe were very fearful that World War III might come at any moment. A fantastic change in attitude!

It is my judgment also, from my visits both in Asia and in Western Europe, that Communism is receding, not growing in virtually every country in the world outside of the Iron Curtain.

Another reason for being optimistic is the fact that even three years ago the military strength of the free world was pretty low. Today the military strength of

the free world is so great that, actually, many of our allies in Western Europe are very fearful that we in the United States are forgetting that we are not rearming to win a war, we are only rearming to prevent one.

I have become more and more convinced each day that if Russia had intended to attack in Western Europe, she would have done so long before this when the odds were more in her favor. Next year is the flood year in our rearmament program. Our Allies know it. The men in the Kremlin know it, and I think it will make Russia move in the future with great caution.

Many Americans feel that the Korean War proved that Russia may attack us any place at any time. I think the Korean war proved something very different.

I visited Korea and visited the truce talks at Panmunjom and I talked with all of the top Japanese statesmen, including Premier Yoshida. I have come to the conclusion that if Dean Acheson had not made the colossal blunder of giving the world the impression that the United States had no vital interest in Korea, Russia never in the world would have encouraged the North Koreans to attack the South Koreans. And when we went to the aid of South Korea as I think we had to do when they were attacked, I think the most surprised men in the world were the members of the Politburo in Moscow because they had not expected the United States to fight in Korea. They thought they could get away with that one merely with a protest in the United Nations. Now that we have demonstrated we will fight, if necessary, for a principle—even in a remote and difficult area of the world—I think it will give Russia pause.

In fact, the way the Korean War has worked out to date, I think it makes a third World War less likely rather than more likely.

Now, of course, when you see the fighting in Korea and see the casualties, it makes you very, very sad and very, very blue. I don't think anybody has a plan for ending the Korean War with honor or winning it quickly. I think we have got to stay in there, perhaps for a long, long time. I think it is one of the penalties for our role as the leading nation, one of our penalties for leadership. The only optimistic note I can bring you on the Korean

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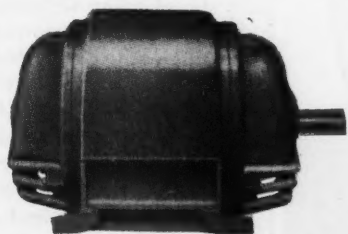
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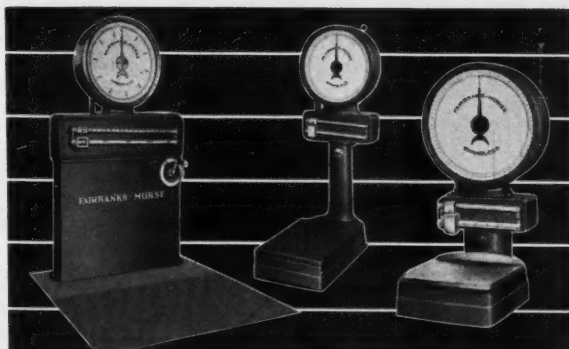
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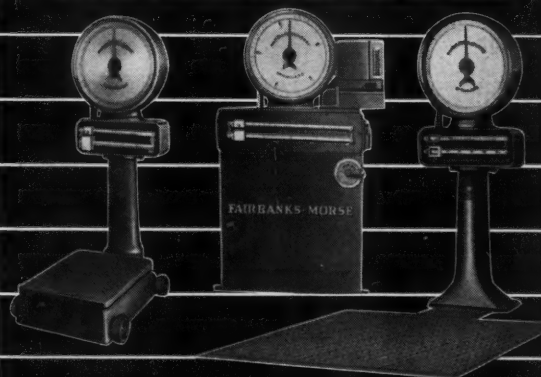
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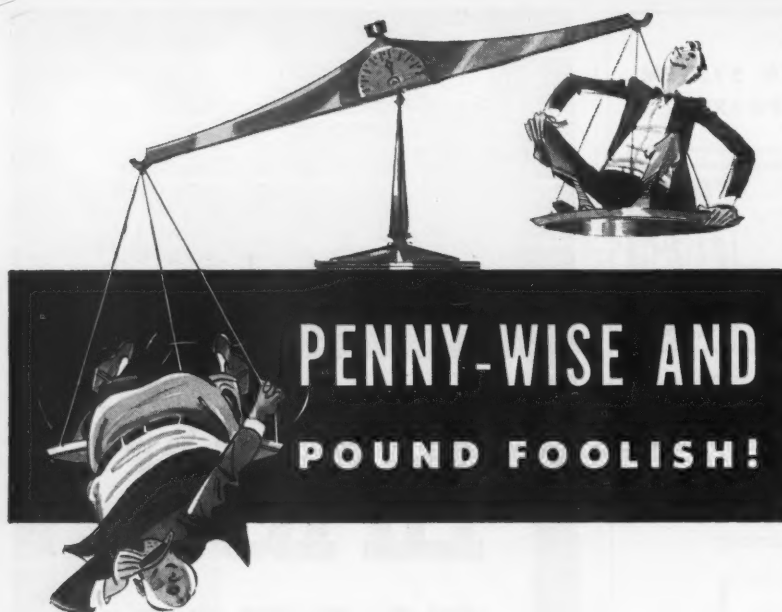


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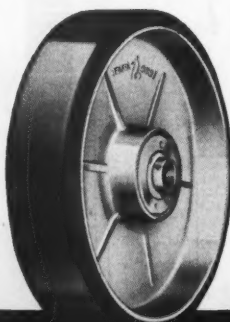


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War is the fact that after seeing the training program now going on, I agree with General Eisenhower it was instituted too late. But Gen. Van Fleet's great training program of the South Korean divisions is turning that nondescript army into really tough fighting soldiers, with American weapons, and some American officers interspersed among South Korean officers. I think, however, that in the future we could look forward to the brunt of the ground fighting in Korea to be carried on by the South Koreans themselves, and that should result in a very much lower casualty rate for Americans.

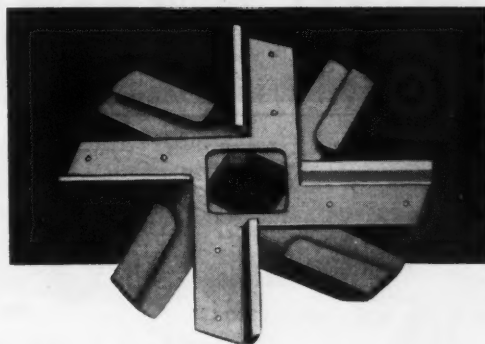
Another very encouraging fact that I think too many American businessmen forget is that, outside of the Iron Curtain, the governments in the free world today are more stable than they were two or three years ago. They are more conservative. They are more to our liking. That is certainly true of the Churchill government in England, if you will compare it with its predecessor. It is true of the Pinay government in France. It is true of the Adenauer government in Germany. I think it is true of the present government in Italy, and it is certainly true of the present government in Japan—with the fantastic election in Japan the other day, not a single Communist was elected to the Japan parliament.

I would say even Nehru, who annoys me by his neutralism, is behaving from our point of view today fantastically better than he was behaving a couple of years ago. I think we should be encouraged that these free governments are stronger than they were. They show more will to resist Communism.

You will need to remember the fundamental reason we have been in difficulty ever since the end of World War II. In whipping Germany and Japan, we left a vacuum both to the west and the east of Russia, and she has been doing her best to fill that vacuum ever since VE and VJ days. There is going on now a remarkable revival in the economies of Western Germany and of Japan. That revived strength may present some difficulties for the United States 20 or 25 years from now. But as of the moment, the improvement in the economies in Western Germany and Japan is going to be an enormous help to us in containing Russia, and persuading Russia not to commit further acts of aggression.

Another thing that annoys me—some of the scaremongers in Washington

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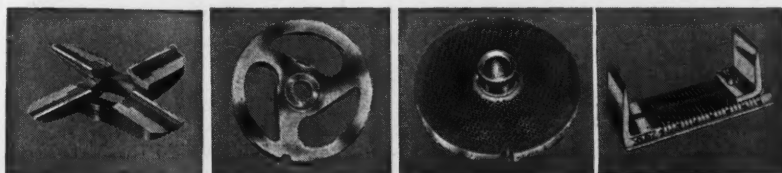
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periodically put out stories that we are pitifully weak, that the Soviet Union is a gigantic colossus which could whip us if we ever got into a war. This is sheer bunk! If you will stop to remember a few simple statistics, I think it will help you keep perspective on our relative strengths. Western Europe alone is going to produce in 1953, according to the best statistics available, some 72,000,000 tons of steel. That compares with some 55,000,000 tons of steel, the best estimate of the amount which will be produced in the Soviet Union and all of her satellites together. If you will add in the United States, and all the rest of the free world, the free world is going to produce next year more than four times the amount of steel that will be produced in the Soviet Union and her satellites.

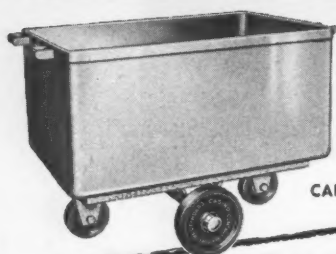
I think it is important sometimes to keep those basic statistics in mind, and I think Mr. Stalin knows those statistics well. Mr. Noble mentioned to you I visited Russia during the last war. I went with Wendell Willkie on his trip around the world, and he graciously invited me to sit in with him when he talked to Stalin at the Kremlin. That was ten years ago this week. The thing that impressed me most about Marshall Stalin was his intimate knowledge of industrial production statistics on the United States. He follows them with the greatest of care. He knows precisely the state of this economy. It is my judgment that so long as Stalin is alive and so long as he is in the saddle in Russia, he will not knowingly get Russia into a war with the United States.

I happened to be in London when the latest Soviet five-year plan was announced. I spent a great deal of time in the British Foreign Office talking with the Russian experts. I think they know more about Russia than the so-called experts in our State Department. They are of the opinion, unanimously, after analyzing that program, that it is not a war program. In other words, that from the announced new Soviet five-year plan, you cannot conclude that Russia is contemplating a major war in the foreseeable future. This seems to me most encouraging.

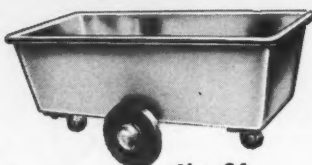
Then, if we look at our own economy, I think we could be confident. Our power to produce has gone ahead faster in the last 12 months than ever before and our economy, it seems to me, has shown amazing elasticity. We have been able to fill gigantic military needs with relatively small impinge-

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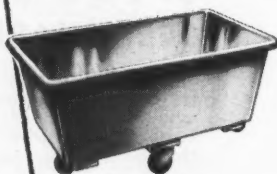


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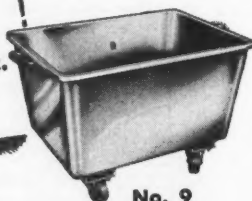
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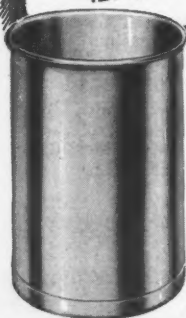
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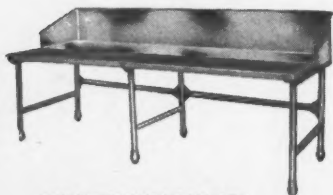
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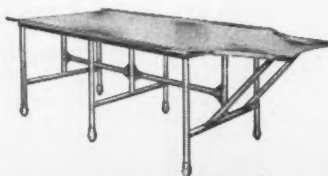


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ment on the civilian economy. Our people were never eating so well as they are today, and I think, basically, our agriculture is in good shape. Inflation, while severe, has not reached the limits many pessimists were predicting two years ago. I would say the consuming public in the past 12 months has shown more restraint and common sense than most of the economists thought possible, and now that we are past the shock and fear which followed the outbreak of the Korean war, our military planners are becoming more realistic in their weapon production time schedules. This is a distinct plus. The plan laid out two years ago, when the Korean war started, was too big and called for too much too soon. I predict the stretch-out in military production will even be further extended next year, particularly if Eisenhower is elected president. That should let us avoid such a steep "hump" in the budget. It should let us avoid further deficit spending. It should retard the rate of inflation. I think we even have a chance to get some tax reduction within 18 months.

I think we will have to continue our aid, in one form or another, to Western Europe and some parts of the rest of the world for perhaps a half dozen years, but it ought to be definitely on a decreasing annual rate.

Now this would not be necessary if the United States were willing to spend now as high a percentage of our national income on imports as we did way back in 1929. In 1929, we were spending 5 per cent of our national income to buy goods overseas. Currently, we are spending 3 per cent. If we were to increase our spending to 5 per cent of our national income, there would be no so-called dollar gap, but if we choose not to increase our imports, then I fear economic aid to bolster our allies will be wise policy for several more years.

I think we can stand the cost. Economist Sumner Slichter says productivity per man-hour is rising in the U.S.A. now faster than ever before, and is rising here faster than anywhere else in the world.

I am also optimistic because of the type of men both of our major political parties have nominated this year. I think both Eisenhower and Stevenson are men of character. I think they both sincerely believe that our traditional free enterprise system is right, and I think neither will sponsor revolutionary changes in the business struc-

ture. I, personally, greatly prefer Eisenhower because I want to see a complete change in Washington. I think he knows much more about the world than Stevenson. I am also nervous about the type of men clustered around Stevenson. Also, I think by the election of Eisenhower we would break the hold that the CIO has on the government in Washington, and I think that is vitally necessary, and I think a Republican victory would bring greater unity in the country. But even if Stevenson wins, I think we can look for more moderation in Washington than we have had in 20 years, and this is important for we need a breathing spell in which to digest the very fundamental changes which have occurred in America in the last generation.

Let me cite one statistic by way of illustration: In 1929, only 1½ per cent of all personal income in the United States was distributed on the basis of need. Now we are distributing more than 6 per cent of all personal income in the United States on the basis of need.

Now that is a long step down the road toward the welfare state, and it would worry me except for the fact that productivity is still increasing in the United States.

After studying England, as many of you have, I am sure, I think you will agree with me that we have got to make certain that the burden of the welfare services in this country does not grow to the point where it will really stifle the dynamics of this economy. I think Eisenhower would be more inclined than Stevenson to hold that burden down.

It is a real tribute to the amazing productivity of America that some of you men here feel that when our defense needs begin to decline, our economy will turn out more goods than can be sold. I don't believe that will actually happen because I feel that the needs and desires of the consuming public can be made highly elastic under the stimulation of harder selling than has occurred at any time since the beginning of World War II.

I think too many businessmen are pessimistic because they don't look at the world in perspective. I think if they will think back where we were three or four years ago and where we are now, they would become much more confident and optimistic.

I don't want to imply that all of the problems of the world are solved because, obviously, there are some tough

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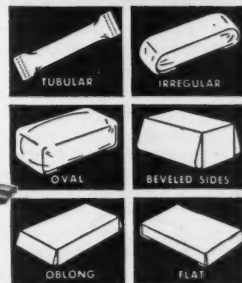


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ones left unsolved. I want to mention three of them, however, three which still greatly worry me.

You cannot visit Asia today without realizing that the United States actually has no foreign policy in Asia. We have no agreement with our allies in Asia. Now, if the Communist threat from Russia is real, if it is global, and world-wide as I think it is, if it was wise for the United States to enter into the great alliance, NATO, with the other 13 countries of the free world in Europe, then certainly, it seems to me, it is wise to have a parallel foreign policy which we and all of our allies could agree on in Asia. But we are a long, long ways from that day. Many of the things we are doing are canceling out what the British are doing or the French are doing, and vice versa. It disturbs me, as the Korean War drags on, that we are not in agreement with our principal allies. I think there could be very grave trouble for us in Asia.

The British still hold to the point of view with great tenacity—a point of view which is very unpopular in the United States, but which we at least ought to understand—that in the long run, Red China will not be willing to play its present subservient role—the role of puppet and satellite to Russia. China is a very proud nation, she is a larger nation than Russia with much more population, much more cultural background, longer heritage and, in the end, China will insist on not being the tail to Russia's kite. The British believe that the basic impetus of British and American foreign policy should be to drive a wedge between Peking and Moscow.

I don't know whether I agree with that point of view or not, but the British and American foreign policy should about it. When you ask them to give you any evidence, any sign, however trivial, that they may be right, they will cite only two things: That whereas Mao Tse Tung in his speeches two years ago always paid fantastic tribute to Stalin, in recent months in every speech Mao Tse Tung has treated himself as the equal, not as inferior to Stalin; and also, whereas a couple of years ago in the celebrations in Peking and some other Red Chinese cities where they always displayed giant pictures of Stalin, that no longer is the case today on those celebrations. There are only pictures of Lenin and Mao Tse Tung. It is possible that the British are right, and in the end, over a period of years,

Mao Tse Tung might become another Tito.

But, our whole policy in Asia, in my judgment, needs grave attention.

Second, when you talk with all the states in Western Europe, every one of them is worried about the Middle East, much more worried about the Middle East than they are about Central Europe and Germany. They are very fearful of trouble in Iran and Iraq and in Egypt and along the western end of the Mediterranean.

Now, we don't like the way the British and French have run affairs in that part of the world in the last decade or so, and yet we are unwilling to take responsibility in that part of the world ourselves.

I think we have got to come to some kind of a policy which we want, and which the British and the French can jointly support. If we don't, I am very fearful that Russia will be the beneficiary in that area.

And third, the United States is becoming increasingly unpopular in Western Europe because they resent our insistence that they must not trade with Russia or with any of the Russian satellites. They feel that they are being strangled between the American high tariff and the Iron Curtain. You all know that there was a very high volume, historically, of trade east and west in Europe.

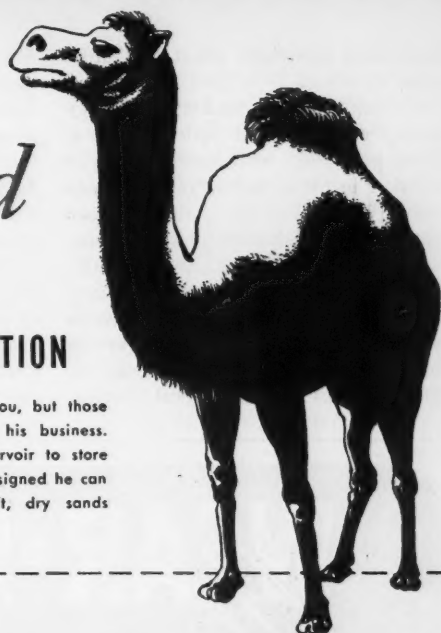
I have come to the opinion that our policy is wrong and should be modified. It is true that to allow Western Europe to trade with Russia and the Russian satellites in everything except finished military weapons would to a degree strengthen the military potential of the Soviet Union. But on the other hand, the trade, in my judgment, would greatly help the health of the economies of Western Europe. I think we need to get Western Europe on her feet without the American aid, and Western Europe wants trade, not aid. In her own self-respect, I think it is important to allow Western Europe to carry on the historical trade, even at some minor risk.

I, personally, feel that the military potential of the free world is now so great that we could afford to take that risk.

Those are three unsolved problems that I mention. Of course, there are hundreds of others, but a balance point I want to make is, I think our side has been gaining and gaining rapidly over the last three years. I think American businessmen should be more confident

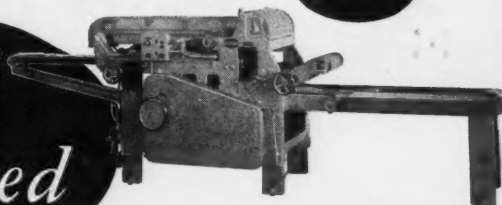
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and more optimistic about the future than they are.

I think if we can conduct the foreign policy of the United States with wisdom and with conscience and with caution in the next few years, we can avoid World War III. I think we can get the federal budget down to some conceivable workable size. If the size of the budget doesn't worry you, stop and think for a minute as I draw in your mind a line from Washington to St. Louis and then up to Minneapolis. The federal, state and local govern-

ments in the United States are taking in taxes today the equivalent of the total incomes of everybody living south and west of that imaginary line from Washington to St. Louis to Minneapolis. Just think what a large portion that constitutes of the total income of the people of the United States.

But, with wisdom in Washington, I think we can look forward to a degree of peace and security and reasonable prosperity for the United States. I think more confidence is justified than exists today in the business world.

*Livingston
of du Pont on*

PROGRESS IN LIVING BETTER

I HAVE A LOT of things on the table here this morning to use as illustrations for a few points I hope I can make. I think I should say at the outset that most of these things are not made by the Du Pont company.

As you can see from your program, the title of this story is, "Progress in Better Living." I think it has a theme song, too, and that theme song might be that we have lived in a country where a man not only could dream, but has had the right and privilege of putting his dreams into execution without some dictator telling him whether he should or should not do so.

And because I want to talk a bit about dreams this morning, I hope I can stir your imagination just a little bit. You know, really, you have to have imagination in this world; otherwise you are lost.

I am awfully glad the ladies are here this morning. They look so bright and shining and you men look pretty dragged out. I think I will talk to the ladies a little bit and if you men get anything out of this, that is all right, too.

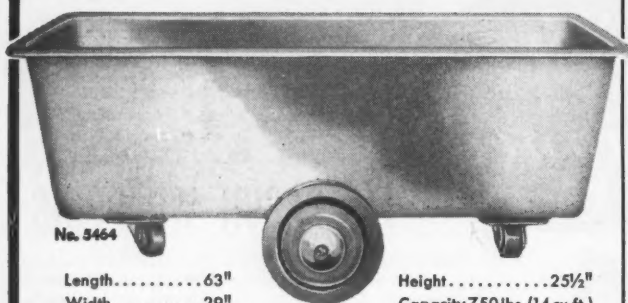
Now, ladies, I said at the outset that these things are illustrations. I would like to start the illustration by showing you a cylinder of polyethylene molding powder, a plastic material, the way we produce it. This sort of molding powder is the type of stuff you put in a mold, give it heat and pressure and take it out in the shape you want.

It was first used as an insulation for electric wires. We always use two words to everything, ladies—so far, so far. It is perhaps the finest so far. Because, day after tomorrow, somebody will make that look like 30c. That is our American way!

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military secret at that time. What happened to it after the war is typically American. As soon as the characteristics of this became known, things began to happen.

Somebody said, we will make tumblers out of it. They are tough, strong, elastic and you can step on them if you want to. Somebody else made bowls out of the stuff. Somebody learned a technique for molding polyethylene bottles, the squeeze type of bottles you get a lot of things in.

Here is a pair of slippers made out of polyethylene, which I got the other day. Wear them in the shower if you want to, on the beach. They are not affected by soaps or greases.

Why am I showing you these things? Just this: It takes a multimillion dollar plant to make polyethylene in quantity economically. If the fellow making this was good enough as a chemist, he could make his own polyethylene, but making that small quantity, that polyethylene would probably cost him \$50 a pound, and you and I couldn't possibly afford to buy the item.

So, here we have, as I see it, big and little business in the chemical industry in the United States. The multiple savings of a host of people gathered together form our American industries so that a whole host of new jobs, new opportunities, new businesses, can be developed.

Now, 92 per cent of the things we in Du Pont make come in this category—the polyethylene molding powder. And, 92 per cent of the things we make never reach the consumer as a Du Pont product. But they go to somebody else and somebody else and somebody else. Sure, a lot of the things go directly to the customers. They are in a lot of different categories that some of you folks know more about than I do—such things as cellulose sponges. But every time one of these things is developed, it is developed in answer to a need. The old adage, go and find what the people need and make it, is still true today.

Years ago in the natural sponge beds of the Pacific, disease spread, and it looked as though we would get no more sponges. So, the research fellows went to work. This sponge is 100 per cent cellulose. It is 100 per cent plant life, whether it is cornstalks, wheat, cotton, wood. Today, they are mostly made from cotton or wood, but there is no fundamental reason why. They can be made from anything that grows.

I could tell you stories by the hour about these sponges. I would like to tell a couple. There is one I have told a good many times.

One day the doctor in charge of research in cellulose sponges took quite a few of these small synthetic sponges and smashed them into small wafers like these. Then, he put them on the shelf and left them there. One of the workers in the laboratory said, "Why are you doing that?"

The doctor said, "I don't know, except if we go on the basis that knowledge means success, we should know

everything that needs to be known about every subject or product or job. If we do that, we can't fail. I don't know what will happen if I smash these sponges into a little thin wafer and leave it a long time, but I am going to find out."

You will remember that early in World War II, German submarines were sinking a lot of ships on the Atlantic Coast. At that time Uncle Sam ordered half a million sponges to be shipped to England. That was a lot of sponges and it took up a lot of space in the holds of ships, space which was

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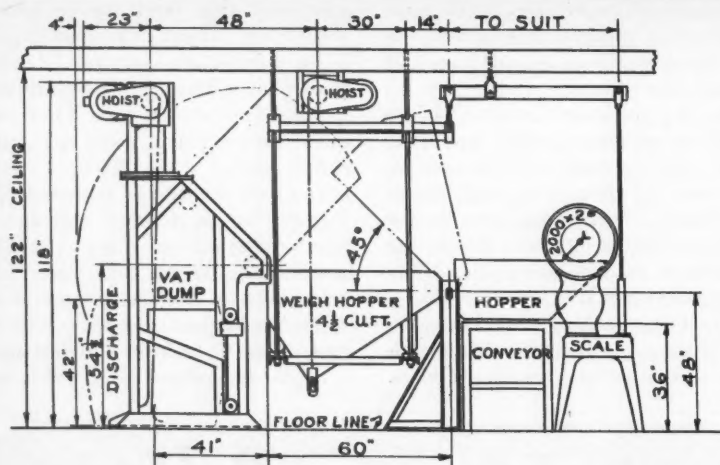
Make up two patties of pork sausage. Add ¼ tsp. of ZEST to one patty. Fry both patties as usual. Taste the ordinary patty... then taste the ZEST patty. See for yourself what a world of flavor difference ZEST makes!

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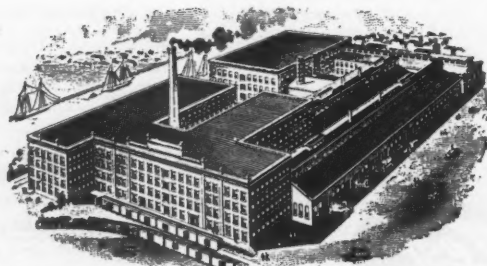
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not then worth its weight in gold, but almost in lives.

The doctor said to the government, "Why not let us smash these sponges to two-thirds of their thickness?"

The government said, "Swell, but how do you know they will be worth anything after they have been smashed for six months?"

The doctor said, "Let's go back to the lab." So, they went back and took the little sponge he had smashed three years ago and he put it in some water. Of course, you know it is going to work all right. It was less than ten days after the government officials went back to the laboratory that we got a new standard specification calling for all cellulose sponges to be put up in a smashed condition for overseas shipment.

To me, that is a perfect example of what I am going to say today: Knowledge means success. We should know everything that has to be known about every subject, every product, every job. Then we can't fail as long as we have the freedoms we have in this United States, and I have no fear for the future whatsoever.

I think maybe you would be interested in another little thing developed not so long ago. Here I have, supposedly, the coaster to stop all coasters.

An individual decided that something should be done about coasters. He looked around and saw, one day, his wife's cellulose string mop. He said, "That picks up water and becomes nice and soft as soon as it is wet. Why shouldn't we make a coaster out of that?"

So, he tried to roll this stuff up and glue it to a dish. It didn't work well. So, he came to us and three different departments worked on this thing. First, the cellulose sponge people made him a very fine type of cellulose sponge, a round string that he could coil up very easily. And next the dye boys developed some dyes that would stay the right color to suit him. Then another group developed a type of cement whereby he could glue this thing to the bottom of his ceramic dish—a cement which wouldn't be affected by tea, coffee, milk or alcohol. And there it is.

He has a little business. At the present time, he is seven months behind in his orders. Sometimes big businesses do help little businesses!

Now, I told you that things are developed in answer to a need. Years ago—well, not so long ago, either—it was determined down in Florida that

awnings wouldn't stand up under the hot suns, rains and the effects of salt water. They needed a better material for awnings. The result of research was a material we call orlon acrylic fiber. Sometimes I like to say it is the next step beyond nylon. But, my nylon friends don't like that too well. It has the strength of nylon, but not the elasticity. You will never use orlon for ladies' sheer hose—you would end up with baggy knees.

Orlon is not affected by the sun. No, that is wrong—orlon is less affected by the sun than any other fiber—so far.

Again, as soon as the characteristics of this became known, things happened. Somebody said, if orlon is so sunfast, why wouldn't it make wonderful curtain material? So, ladies, here is your curtain material of orlon. All the indications are that it will stand up better in the sun than most of the other fabrics on the market.

Now, orlon has this very interesting characteristic of holding a press. It is crease-resistant. Now, your husband sometimes goes out in the rain. His raincoat comes only to his knees and below his knees. Pretend it is a rainy day. Here is a pair of orlon, freshly pressed trousers. You can see the crease all right. It is raining a little harder now. He just stepped off the curb and went into his knees in water. I don't know exactly what it will do to the press of the ordinary trouser, but I think you will find that the press is still all there.

Now, ladies, I am asking you to use your imagination this morning. Just think, in the future, your 12-year-old boy you always miauw at to hang up his clothes—think of the possibilities—comes home and throws his clothes in the corner. Who cares? He can put them on the next morning and they will have a perfect press. A possibility? Certainly.

There is still another one, and this pair of stockings is made out of dacron, a polyethelene fiber. It is a brand new one. Why was it developed? Well, for many reasons, but I will give you one. I may be caught up by some of you fellows, but I think my figures are somewhere near right. Back in 1940, the United States produced around 434,000,000 lbs. of wool. You know the production of wool in the United States has been going down and down. They needed a more wool-like synthetic fiber. Dacron is the most wool-like synthetic

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fiber, so far. It isn't on the market generally. It is only being made in little pilot plants now. You will find it here and there in various garments, because it is being tried out thoroughly. I doubt if it will be on the market in quantity before the end of 1953.

Dacron is a very interesting material all the way around. Here is some suiting material out of dacron. I want to go back to orlon just a minute. It applies to orlon, it will apply to dacron. On the front of this table I have three pieces of fabrics. Those are blends of orlon and wool. One of them is 70 per cent wool, 30 per cent orlon; another 50-50, and another is 65 per cent orlon and 35 per cent wool.

One of the great textile men of the country told me we are entering a phase where there will be the greatest blending of natural and synthetic fibers the world has ever seen. They will be blended first from an angle of utility and, second, from an angle of beauty. These new fibers will be blended with natural fibers to give us a greater result all the way around for the money that we spend.

I hesitate a little bit to say anything about cellophane to a group of this character, because so many of you know a lot more about it than I do. I have colored cellophane here simply because it is pretty. You know, there are 59 varieties of cellophane and most of them are not colored at all. They are white or clear.

I like to talk about cellophane for one reason, and that is, it illustrates a point again. Years ago, we acquired a patent on cellophane. It was a success here in this country, but it was expensive. It cost \$1.65 a pound. But, we had a patent. When Uncle Sam says you have a patent, you can have a monopoly on it for 17 years. That is good. That is a reward for your doing something. But the one thing so often overlooked by so many people is that you never have a monopoly on the job that your product does. If you invent something and sit back on your laurels, look out. Some good, live American, will find a better way to do the job than your product. That is good because it keeps everybody on his toes. That is old man competition.

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about the price today than I do, but it is about 60c a pound.

Some cellophane must breathe, some must be moisture resistant and some not. I have two kinds here. Suppose you are going to have a party—we like to see you use cellophane. It is a minor issue, though. But, don't get any like this, because we all believe in safety and if you use cellophane as a decoration and it catches on fire and supports the flame, that is bad. Get some like this. It will char and smoke but will not support the flame. It will not flash. It is a safe thing. Be very, very sure that on the tag it says "flame resistant."

You know, there has been a lot of work on safety in the country and we are all proud of it. There has been a lot of work done on fire retardant chemicals. The draperies in this room are treated with a fire retardant chemical.

Any insurance man will tell you in any year a certain number of our children lose their lives or are badly burned because their clothes caught on fire. Why haven't their clothes been treated with fire retardant chemicals?

Well, there are two primary reasons. One of them is that fire retardant chemicals have a tendency to stiffen up the materials. That makes no difference in a drape, but it does in children's clothes. Again, most of them are toxic to the skin.

The research boys have continued their work and they have a new one today, erifon. Spell it backwards and it spells "no fire." Erifon does not change the hang or feel of the material. It is not toxic to the tender skin of a child.

I have a piece of chenille here. The lower half is not treated; the upper half is. You couldn't dunk a dress in this stuff; it is a machine operation. It must be applied when the goods is manufactured or in the bolt. Now, let's pretend this is a coverlet on a child's bed, perhaps. I hope this works—there, you have it. It burned half-way.

If we can save the life of just one child, all the research is worthwhile and it all ends up to our "better things for better living." You can't buy it now, ladies. Uncle Sam found out about it. Every pound we can produce is going to treat military goods, and that is all right, too. If we can save the life of just one boy in service, that is fine.

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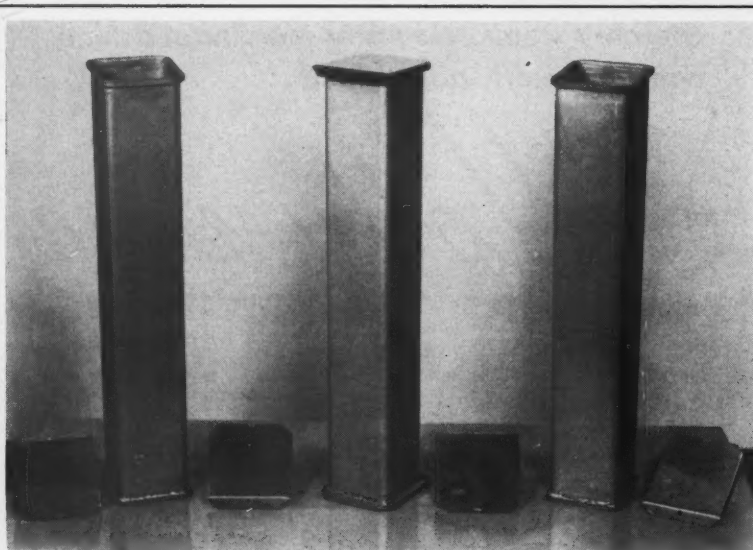
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and now I want to talk about something else. This pair of socks and this roll of motion picture film are first cousins. Quite recently, there has been developed a polyester film. I have here a piece of polyester film made up into motion picture film. Now, I want to talk about motion picture film for just a minute. When you go into a movie house, the film must be shown from a booth. Why? Because that film burns readily. It is the clearest of all film, or was, but it must be shown from a booth because of fire.

Your home movies are made of safety film because they do not burn as readily. Safety film is not quite as clear as commercial movie film. This new film is as clear as commercial movie film. It is safer than safety film. It can be made 20 per cent thinner so you can put 1,200 ft. on a 1,000-ft. reel, and it is tough. If any of you have played with home movies you know the film breaks at the wrong point. It tears rather easily.

This new film is not on the market. Maybe we can produce it in quantity economically and do that job; I don't know.

In the same breath, here are sheets of polyester film that we call mylan. That whole thing is in its infancy. This material is tremendously tough, wonderfully clear and has enormous possibilities. How far, how fast will it go, wherein will it be possible for it to be economically used? Your own imagination, gentlemen, will be just as good or maybe better than mine.

As things are developed, once in awhile we run across something that has a great deal of glamor. Lucite is perhaps the most glamorous of all the plastic materials. We produce it as a molding powder and in the sheet form; we never make any articles from it. It is used enormously in our planes and automobiles.

But I would like to talk about something that is perhaps not as well known. This is an embedment with lucite. You ladies have had lucite embedments with little flowers and things in earrings. But, that was a pretty slow, tedious job. This is one-half of a radio tube put up in a solid block of lucite.

You are looking at a whole new technique in visual education. Why? Because lucite is made by Du Pont? No. Because a little outfit up in Atterbury, Mass. worked out a technique whereby they could do this kind of job in quan-

ity, economically. Say, you are teaching a class in radio and want to show the students the inside of a radio tube. Did you ever try to cut one in two? There is a perfect half that will look like that for the next 50 years, perhaps. It can be shown to hundreds of thousands of students. That is why I say you are looking at a whole new technique in visual education.

There are so many things that come along. I would like to go back now, if I may, to World War II. The walkie-talkie lasted one hour in the South Pacific jungles and then went to pieces because of the humidity and temperature. They needed a silver ceramic coating. You ladies know the ceramic coating, the color on the china teacup. The color is put on and the cup put in an oven or fired or burned to have the color stay on. They didn't dare fire the delicate instrument, the walkie-talkie, or they would have ruined it, but they still wanted a silver ceramic coating. So the research boys developed one that did not require firing. You paint it on. We will call it silver paint.

Remember, silver is a high conductor of electricity. So, it was electroplated with copper to the silver. Once they had that, they could solder a wire to it. So, if you want to, you can solder a wire to a china cup or a glass tumbler!

It was used in nine different places in the walkie-talkie, and after that it was used successfully in the South Pacific jungles. I wonder how many American lives were saved by that application of research, by somebody's knowledge, in our free American way?

Here is another one that I want to tell you about. This is a rod of material we call teflon. It is kind of a hard thing to describe. I might say it is the "most inertest" material I know. That is lousy English, but it is true. It is not affected by acid, alkalis and will stand tremendous heats. To illustrate to you, (demonstrating) we took three rods, one of pyrolin, one of lucite and one of teflon. We put these three rods in boiling sulfuric acid. That will eat a hole in a lot of things. In 30 seconds, the pyrolin was half gone. In 40 seconds the lucite was half gone. We left the teflon in the acid 30 minutes and I defy you to tell which end was in it.

At the present time, it is not being made in quantity. It can be used and is being used as gaskets in chemical pipelines, because of its inertness. And here is some teflon tape. The manufac-

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turers of electric motors have been playing with this. One of the limitations on the motor is this, that as the motor gets hot, the insulation burns. The motor company says the motor could run more efficiently if it could be run hotter, but the insulation burns up. But teflon does not burn. So they say if and when they can get teflon-coated wire, they can reduce the weight of an electric motor by 50 per cent and still get the same horsepower out of it. If you can conceive, then, of a big plane having 80 electric motors and reduce each motor by 50 per cent, think what it will do to the pay-load.

Here is a heat sealer for cellophane bags in a deep freeze plant. It has two metal heating elements and you put strawberries in the cellophane bag and fold it over and heat seal. Sometimes, if you get a little careless, you spill strawberries on the hot metal. It chars and is hard to clean up.

Some bright boy said, why not put a couple of thin sheets of teflon over the two heating elements? They did. Now, you can spill all the strawberries you want in there. They can char and burn, but flick, and they are gone. Nothing sticks to the stuff. They were glued on the heating elements because they didn't know how to do it yet. But, just think, if somebody learns how to laminate the inside of a frying pan with this, what a boon to brides!

That isn't so far off, ladies. I have a bread tin here that is coated with an experimental type of teflon enamel. This bread tin was used in a commercial bakery and baked 1,258 loaves of bread and it has never had a drop of grease in it. Nothing sticks to it.

And the other day they sent me this one, an experimental muffin tin. I immediately took it home and asked my wife, "How about a batch of muffins?" She put them in and when they were done she turned the tin over and they came out. You know how the stuff runs around the edges? She said, "How about that?" I said, "Put it under the water." It all came right off.

You see, there are a lot of possibilities in these things and they are all in their infancy. I have tried to give you an impression about some of these things, as they are long-time, heavy research jobs. We are rather proud of the fact that Du Pont spends \$50,000,000 annually on research. I don't mean to imply though, that you have to do that in order to answer needs.

I would like to show you another

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one of these things that must be made in a multi-million dollar plant. This is raw neoprene, synthetic rubber. It is the first successful synthetic rubber made. It will do all the things that natural rubber will do, and it is not affected by greases, oils, gasolines or sunlight. It is used as insulation for underground wiring because of that characteristic. When you drive up to a gas station to buy gasoline, the chances are pretty good that the hose that carries the gasoline to your car will have neoprene in it.

Somebody said, if gasoline doesn't affect it, why not make a sponge out of neoprene to sop up gas. Then they found out it was tough. Then somebody said, if it is so tough, let's make some soles out of it. They did.

Then somebody developed a type of neoprene adhesive whereby they could glue it to any kind of a sock, cotton, wool, nylon—very comfortable to shove your feet into on a cold night. Remember, it is not affected by soaps and so on, so when this gets dirty, throw it in the washing machine and it comes out okay, without the rubber going to pieces.

Neoprene goes into a host of things. Ladies' gloves used in the kitchen are usually of neoprene origin.

I said a moment ago it was necessary to find out what the people need and develop it. And I want to try and prove to you that in our American way we do not have to have \$50,000,000 for a research program to develop things.

Here is an ordinary ladies' overshoe or rubber. This one goes on the right foot. Now, you ladies all know that when you walk down the street on a wet, rainy day, the chances are pretty good that you throw water from the right rubber to the left ankle and get your nylons spotted.

This chap studied that situation, and he did something about it. He invented an addition to this rubber. A little point sticking down there—that is the entire invention, that little neoprene addition to the heel. Now, as the lady walks down the street, that comes up, the water concentrates and runs off and doesn't splash.

So don't ever say there isn't opportunity in our country for the man that sees the job and does something about it.

I am going to ask you to use your imagination once more. We are going on board ship into the little operating



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room. The operating table is always covered with a rubber sheet or neoprene coated, as the case may be. Say we have a patient on the table who has been given ether—there are ether fumes all over. Ether is much more explosive than gas. The surgeon comes in, starts to touch the patient and there is a static spark and accidents happen.

Uncle Sam said, "Can't you have a rubber sheet conductor of electricity grounding the patient through the rubber sheet to the metal table below and get away from explosions?" I have here a type of neoprene coated sheet which instead of being the good insulator it usually is, is a conductor of electricity.

Today, every Merchant Marine ship uses this neoprene coated sheet, and 95 per cent of the operating tables in the United States are covered with it. To our knowledge, no accident due to static electricity has happened since that went in.

Now I have traveled around a lot and somebody always gets up and says, "Mr. Livingston, when Du Pont has a wonderful idea, when does it come on the market?" Our average is seven years from the time a project

starts in the lab. With nylon, up to the end of the seven years we had a piece of fiber 6 ft. long. The machine that made it was a hypodermic needle—\$6,000,000 spent in seven years!

The Du Pont company is really run by an executive committee of nine men. I have great admiration for those gentlemen. They have a grave responsibility. They know that among other things, 19 out of 20 research projects fail, that only one out of 20 rings the cash register.

Now, I am going to ask each of you to be one of the nine men on the executive committee at Du Pont. You are in executive session. Remember, the responsibilities are yours and the decisions are yours, and they are big. In comes a gang of researchers with the piece of fiber. "Look, what we've got, and we only spent seven years and \$6,000,000!" I think you would say, "That's fine, what can you do with it?"

"Oh, I don't know."

"How strong is it?"

"I don't know."

"Can you dye it?"

"I don't know."

"Can you weave it?"

"I don't know."

"What can you do with it?"

"I don't know."

I wonder if about that time you wouldn't say, "Well, there goes another one of those 19. They didn't, though. And the researchers worked for four years more—11 years all told, \$27,000,000 venture capital. And then we had the first nylon.

We believe in knowing everything there is to know about every subject on every job and you can't fail. The boys have never quit their research on nylon. Nylon is going into a molding powder for plastic work.

If you get a blood transfusion, it may be through a nylon plastic tube because it can be sterilized so readily. We make bearings out of nylon, they are greaseless. Did you ladies know that practically every baby buggy wheel bearing that is made today is a nylon bearing because no oil is needed and it never squeaks and wakes the baby.

I have tried to picture what I think is the story of the American chemical industry. It is really the story of our American way.

And yet there are people in this country that want to change it. For a

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long time I couldn't understand it, but now I think I can. I think the reason is industry is at fault. It hasn't told its story.

That is why I like to tell this kind of a story. I will bank on the opinion of the American public any day, as long as they have honest information. But in the past, they have not had honest information about industry. The "lefty," the "commie" and all the rest of the gang have been able to say anything they wanted to and get away with it.

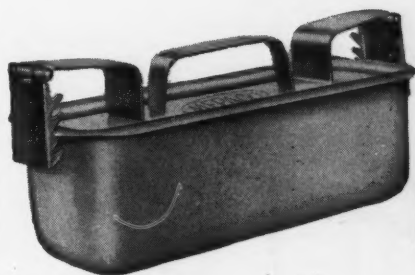
Maybe that is partly my fault, and partly your fault. Every once in a while somebody comes up and says research is responsible for everything we have in this country. I will agree with that if I can define research. Every time any one of you here does a sound job of thinking on any problem, that is my definition of a research.

We need a whale of a lot of that kind of research today, but always remember this—we pull no rabbits from the hat in research. There is rather more to it than that. Research represents long years of patient toil and sweat, a dash of brains. But don't forget, we have hardly more than started yet, with research!

AMI OFFICERS

At the annual meeting which closed the convention, H. H. Corey, president, Geo. A. Hormel & Co., Austin Minn., was reelected chairman of the board of the American Meat Institute. Wesley Hardenbergh was reelected president; Homer R. Davison and George M. Lewis were reelected vice presidents; H. Harold Meyer, president, H. H. Meyer Packing Co., Cincinnati, was reelected treasurer, and Roy Stone was reelected secretary and assistant treasurer.

New directors are: W. A. Barnette, Greenwood Packing Plant, Greenwood, S. C.; John H. Bryan, Bryan Brothers Packing Co., West Point, Miss.; J. M. Foster, John Morrell & Co., Ottumwa, Ia.; L. F. Miles, Peyton Packing Co., El Paso, Tex., and Louis F. Long, The Cudahy Packing Co., Omaha, Nebr.



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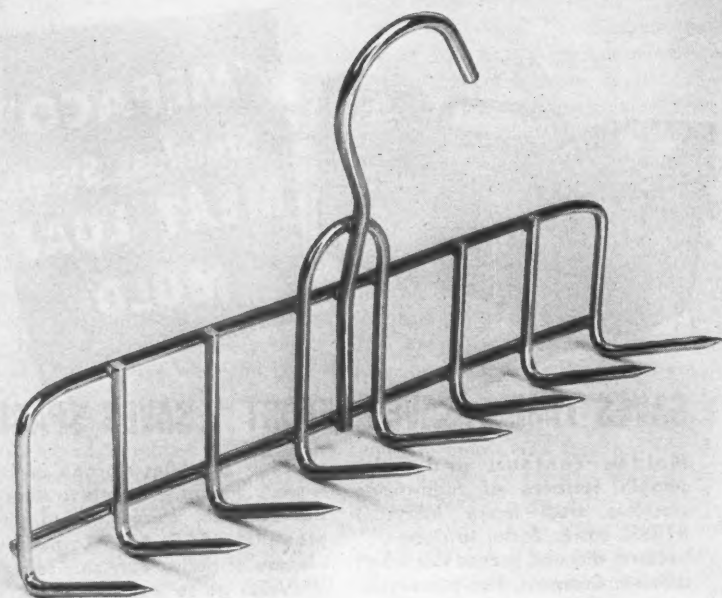
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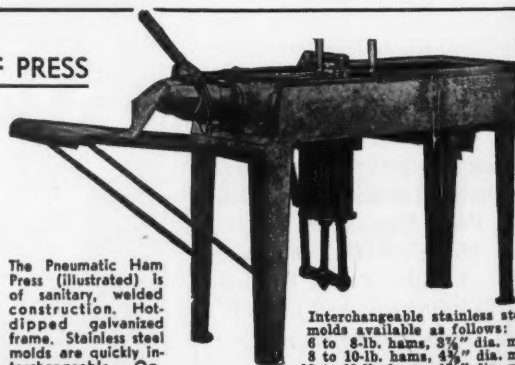
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SHEET METAL ENGINEERING CO.

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The Pneumatic Ham Press (illustrated) is of sanitary, welded construction. Hot-dipped galvanized frame. Stainless steel molds are quickly interchangeable. Operates on 60-lb. to 125-lb. pressure.

Interchangeable stainless steel molds available as follows:
6 to 8-lb. hams, 3 1/4" dia. mold
8 to 10-lb. hams, 4 1/4" dia. mold
10 to 12-lb. hams, 4 3/4" dia. mold
12 to 14-lb. hams, 5 1/4" dia. mold
14 to 16-lb. hams, 5 3/4" dia. mold

Burying fringe labor costs in overhead is a dangerous practice.

This is particularly important when we realize the tendency in our industry of the sales department to ignore overhead in setting prices on products which must be moved. Labor standards should include all fringe labor costs.

I recommend that all fringe labor costs be allocated back against the department, operating or service. Knowing the cost of each fringe labor expense is particularly important when we consider an all-too-common practice prevalent in our industry. This occurs when operating men figure the cost of a particular operation by multiplying the hours worked by the rate of the worker, thereby overlooking 30 or 40 per cent of the actual cost.

Overhead expenses consist of indirect expenses, such as power, light, heat, refrigeration, depreciation, insurance, taxes, superintendents' salaries, janitors, watchmen, miscellaneous general manufacturing and general administrative expenses. I also recommend including in the overhead charge an allowance for interest on investment. Time does not permit a detailed discussion of the method of distribution to operating departments and the accounting problems involved.

In brief, I suggest budgeting these expenses on an annual basis and allocating them to operating departments, dividing the total dollars by estimated production for the year to determine the unit cost. Since each operating department has its own proportionate share of buildings, equipment, etc., and since products may be sold in various stages of processing, I believe these expenses should be

allocated so as to provide separate overhead unit cost for each operating department. It should be remembered that if your company performs all operations, departments in your company are competing with companies who are doing only one operation, such as sausage or smoking.

The effect of this method of overhead allocation is that each successive stage of processing will carry an overhead charge. As a result, a selling price of smoked bacon will include the overhead of curing and smoking, and a sale of sliced bacon will include the overhead of curing, smoking and slicing.

Supplies and cartons will vary depending upon the type of product and the size of the order. It may be an elaborate 1-lb. package which must be included in an outer carton or a plain 100-lb. fibre box.

Order filling will also vary depending upon the size of order, whether it be carload or a city order. The same is true of selling and delivery expense. It is recognized that attempting to determine exact cost on the innumerable variations in product sizes, and types and sizes of orders can be taken to extreme.

Each packer must know at what point the excessive paper work involved becomes burdensome and valueless. It is suggested that the packer determine the average cost of order filling, delivery and selling. For example, local delivery may be used as the basis if this represents the greatest percentage of sales. A differential can be provided for sales which vary greatly from the standard.

Exhibit C, showing comparative realizations of fresh smoked and sliced bacon, is a form which can prove invaluable to the sales department and top management. It



"POTENT TO THE LAST GRAIN"

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LELAND CHEMICAL CO., INC.
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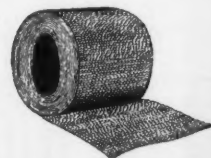
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Beef Tubing and Ham Tubing of standard weight, packed into rolls for cutting to desired size by the processor.



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SERVING THE MEAT INDUSTRY SINCE 1905
Elm and Market Sts. Dallas, Texas
MEAT PACKERS' AND SAUSAGE MANUFACTURERS' SUPPLIES AND EQUIPMENT

provides a simple and easily understood picture enabling management to see the most profitable way to move a product. It shows the relationship between the fresh market and the smoked slab and sliced bacon costs. It can be easily prepared from the cost tests Exhibits A and B.

It should be the basis for setting selling prices. The various expenses used in determining the cost are clearly shown and the sales manager can quickly determine the best sale without calling the cost clerk or going through a lengthy figuring of a cost test. This is particularly helpful when management is confronted with making a quick decision as to the most profitable way to move a product on which a surplus has developed.

If the sales department is unable to secure the costs of smoked slab bacon or sliced bacon as shown, they may be forced to sell at a price lower than the costs shown. With expenses and overhead known, they will know how much the price realized contributes to the overhead and what the price is equivalent to on a fresh basis.

Exhibit D, Processed Products Profit & Loss, can easily be prepared from Exhibit C. It shows the profit and loss on all processed products. It should be prepared at least once a week and, in addition, at any time there is a major change in market prices.

Time does not permit a further discussion of the many points which could be elaborated upon. The examples submitted are merely to show the fundamental principals involved. Innumerable variations can be made in the exhibits to take care of the different cost calculations which may be necessary on various packinghouse products.

Cut Needless Reports to Government



REDMAN

PURPOSE OF THE COMMITTEE
on meat packing of the Advisory Council on Federal Reports is to counsel with, and advise, the Bureau of the Budget in matters pertaining to record-keeping and reporting requirements of federal agencies.

First, I would like to tell you about the Advisory Council on Federal Reports. This Council was formed in 1942 at the request of the Bureau of the Budget. It is an unbiased agency composed of members who are either appointed by the sponsors or selected on the basis of personal qualifications to represent business at large.

It is financed entirely by voluntary contributions from business and industry associations. It is not a government agency as some people believe because it consults on federal reporting programs.

The Council sponsors many industry committees which in the past ten years of its existence have made a large contribution toward simplifying and improving government questionnaires. This, in turn, has produced very real benefits toward relieving the burden on industry and government.

In many cases, substantial economies have resulted, not only to business concerns, but also to the government because simpler, more efficient, and more dependable federal

administrative methods have been made possible. I do not think that there has been as much awareness as is warranted of the effective work done by the Council and the opportunity that is available through its committees for relief from onerous reporting and record-keeping burdens, and in the improvement of the quality of federal statistics.

As you probably are aware, the Federal Reports Act requires that before approval is granted for a new questionnaire, the Bureau of the Budget must take into account the impact and burden that will be imposed on industry. In this connection, the various committees that are sponsored by the Advisory Council on Federal Reports, such as our committee, provide advice to the Bureau of the Budget personnel in the review of new types of questionnaires and the record-keeping and reporting requirements of regulations before they are approved.

This procedure eliminates, to a considerable extent, the confusion which may result because of the over-hasty issuance of ill-considered reporting and record-keeping requirements. Through this medium it provides respondents with a protective opportunity to be heard in advance as to the availability of the data to be provided.

The Advisory Council committee for the meat packing industry has been in existence for two years. It has been a very active committee and its help to the Budget Bureau has resulted in tremendous savings to the industry. We have also been fortunate in having a committee which includes representatives from companies of various sizes and types of operation, as well as geographic location. The members are as follows:

C. A. Bastow, The Cudahy Packing Co.; A. C. Bruner, East Tennessee Packing Co.; P. J. Burch, Stark, Wetzel & Co.; Wm. A. Cook, Wm. Schludenberg-T. J. Kurlde Co.; H. M. Eitel, Wilson & Co.; C. P. Elsen, The E. Kahn's Sons Co.; A. E. Ericson, Oscar Mayer & Co.; E. J. Garrity, Geo. A. Hormel & Co.; Joe Gibson, The Rath Packing Co.; L. C. Hageman, Luer Packing Co.; K. E. Miller, Armour and Company; R. E. Nowland, John J. Felin & Co.; J. F. Sells, John Morrell & Co.; Dudley Smith, Elliott Packing Co.; K. R. Woodruff, Hygrade Food Products Corp.; J. Russell Ives, American Meat Institute, secretary, and T. G. Redman of Swift & Company, chairman.

We have been holding quarterly meetings that have been well attended, and much of the success of the committee has resulted from good attendance and also the splendid cooperation that has been received from Russ Schneider, executive secretary of the Advisory Council.

Representatives of the Budget Bureau have not only attended themselves, but also have arranged to have qualified representatives from the government agencies present when their reports were under review.

At the inception of the committee, its activities were confined mostly to a review of existing reports; however, because of the advent of the Defense Production Act which was passed in 1950, many new reporting problems arose and, as a result, while the quarterly meetings brought into focus these reporting problems, the committee became very active during interim periods reviewing record and reporting requirements of proposed OPS regulations which would affect the industry.

During the past year, most of the activities of the committee dealt with requirements under OPS regulations. In some cases, many of the onerous and burdensome re-

quirements were either reduced or modified.

As an example, in one particular instance connected with the establishment of ceiling prices on processed beef items, the proposed OPS regulation required an examination and tabulation of all sales made during a 13-week base period.

In the case of one large company, this would have required the analysis of millions of sales invoices. The matter was brought to the attention of the Budget Bureau, and a special meeting was called to discuss this burdensome requirement. A sampling procedure was agreed upon that produced representative figures at a fraction of the expense that would have resulted under the proposed requirement.

There have been similar instances in which the reporting requirements of proposed regulations were burdensome, and it has been very helpful to be able to review such requirements before they became effective, rather than to correct such requirements by the issuance of later amendments to the regulations. I am sure that the opportunity of discussing such problems has been most beneficial to the industry and the government.

In connection with the recent extension of the Defense Production Act of 1950, it now carries a requirement that reductions be made in reporting and record-keeping requirements on the commodities which are currently selling below ceiling prices.

A review of the regulations affecting the meat industry for a further reduction in the reporting burden has been made and reviewed with the Bureau of the Budget.

Our last committee meeting was held in Washington on June 5 and 6. This is the first time that our committee met in Washington. It was a most profitable meeting since it gave our committee an opportunity of meeting representatives of the various federal agencies; i.e., Bureau of Labor Statistics, Department of Agriculture, OPS, Census, and others, and I am sure that the benefits derived from this meeting will be forthcoming in the committee's work.

At the present time, the committee is actively engaged in reviewing the various forms which the Bureau of the Census will use in connection with the 1953 Census. A preliminary review of the proposed form dealing with the meat section indicated the reporting of sales figures by

detailed items for which the industry ordinarily would not have figures available.

Through the committee, this provided a basis for having the forms corrected before they were finally adopted. We also have other subjects under review which we hope to have finalized at future meetings.

While I have naturally emphasized the importance of the committee's activities in the matter of record-keeping and reporting burden, I can say that the recommendations of the committee have generally been well received on the part of the federal agencies; also, the government agencies have benefited because of greater accuracy of the statistics which are compiled.

Another by-product which I think is well worth noting is this: In our work with government reporting and record-keeping programs, we have come to realize that there is a vast amount of statistical information published each year by private, as well as government agencies, which deals with the livestock and meat industry.

These statistics are of considerable interest to the government agencies and to the general public, as well as the trade itself. However, in many instances, the uninformed users of these figures have little or no conception of how the figures originate.

On occasion, I have obtained the impression that some folks think they must grow on trees, or otherwise ripen for periodic harvest in the form of printed reports. Nothing could be further from the truth.

For example, take the simple figure of weekly hog slaughter for each federally inspected plant which is supplied to the meat inspector in charge, who, in turn, forwards it to Washington for summarization and totaling. Or take the quinquennial census of the meat packing industry, which for a single plant requires the entry of literally hundreds of separate figures dealing with nearly all phases of a company's operation. All of such figures must come largely from the routine records which are kept by a meat packing company in its daily operations.

There is yet another "by-product" benefit which our industry enjoys by reason of this committee. The very existence of the committee and the knowledge of its existence by federal agencies makes them all the more careful in promulgating new reporting and record-keeping requirements for submitting to the Bureau of the Budget for approval because they know what the review process is and the part we play in it.

This "by-product" benefit to our industry is frequently overlooked, but I cannot over-emphasize its importance.

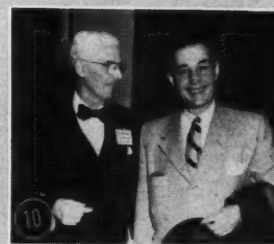
When it is realized that such figures can be no more accurate than the records from which they must be assembled, we get a better appreciation of the data which we see published on the meat industry in hundreds of reports during the year. Furthermore, government agencies which collect and publish this information have a better appreciation of what they can and cannot collect.

We feel very grateful for the cooperation that we have received from Russell Schneider and members of the staff of the Bureau of the Budget.

I am sure that those of you in attendance are cognizant of the increasing burden of government requests for reports from industry. I suggest that you review your own situation, and if you find that you have any problems in connection with any such questionnaires, it will be appreciated if you will inform our committee of them.



SEATED: R. D. Hanrahan, H. A. Lotka, sales manager; L. E. Houck, assistant division manager; B. H. Schenk, vice president, and E. T. Reedy, merchandising. STANDING: W. J. Megginson, J. Milio, district manager; R. J. Wells, E. J. Warner, Alex Chesser, district manager; Dick Zerby and C. W. Whitford, district manager. BACK: K. H. Nissen. All are connected with the Visking Corporation, Chicago.



AN INDUSTRY SAMPLE

1. Arthur W. Paddock, Robert F. Armbrust and E. C. Jones, president, all of Jones Dairy Farm, Ft. Atkinson, Wis.
2. R. C. Theurer, president, Theurer-Norton Provision Co., Cleveland; C. R. Vann, president, Ohio Natural Casing Co., Newark, O., and G. E. Stutz, Stutz Casing Co.
3. T. B. Halpin, Preservaline Mfg. Co., Flemington, N. J.; A. P. Carpenter, general manager, C. A. Durr Packing Co., Utica, N. Y., and Fred Roessler, sales manager, Roessler Packing Co.
4. E. Karbeling, editor, *Annual Meat Packers Guide*, Chicago, and Jim Conway, Partlow Corp., Chicago.
5. R. W. Regensburger, vice president; L. W. Bermond, Chicago plant manager, and J. P. McShane, supervising engineer, all of Swift & Company, Chicago.
6. S. Stone, partner, Esswein & Hunter, Buenos Aires, and Frank Bilek, vice president, engineering, The Globe Co.
7. Edward V. Fox, sales manager, Danahy Packing Co.; F. Danahy Georger, vice president and general manager, R. B. West Co., Inc., and Alfred J. Danahy, vice president, Danahy Packing Co.
8. A. F. Jaumann, Leland Chemical Co., Milwaukee; L. G. Herman, bacteriologist, Wilson & Co., Chicago, and Irv. Fox, general manager, H. & S. Provision Co.
9. J. H. Ross, Fort Engineering and Sales Ltd., Montreal; I. Heymanson, president, and C. B. Jensen, engineer, Atmos Corp.
10. Frank N. Davis, *The National Provisioner*, and W. J. Best, Best & Donovan.
11. R. J. Gunderson, president, and J. Seeley, vice president, Roberts & Oake.
12. Matt Brown, president, Great Falls Meat Co., Great Falls, Mont., with Mrs. H. J. Horton and Mr. Horton, John E. Smith's Sons Co., Miles City, Mont.
13. Lorenz Neuhooff, jr., president, Valleydale Packers, Inc., Salem, Va., and Lester I. Norton, president of *Provisioner*.
14. H. W. Wernecke, sales manager, *The National Provisioner*; R. D. Wilkinson, Keebler Engineering, and Robert E. Davies, *Provisioner*.



Forty-Seventh Annual Dinner of the American Meat Institute

Held at the Conrad Hilton Hotel in Chicago on October 6, 1952. Address by Dr. Reuben G. Gustavson, Chancellor of the University of Nebraska.

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Winning More Food From Nature

CHANCELLOR GUSTAVSON TELLS HOW NEBRASKA IS
ADAPTING AGRICULTURE TO STATE'S ENVIRONMENT



GUSTAVSON

on which I was asked to speak—to tell you something of the work that is going on in the state of Nebraska.

The story of what is going on in Nebraska is a story of what is going on in the Middlewest. Therefore, although I speak of my own state, I would like to think of it as an illustration of what is going on in that entire part of the country.

The Nebraska story is but a page in the long history of man's attempt to build for himself a home in a world that is partly friendly, partly unfriendly, and I suppose most people would say, very largely indifferent. Thomas Huxley once made the statement that life was something like a game of chess, in which man played with nature with his life as the stake. He said that nature always played with one attitude—that every mistake the opponent made resulted in ears getting boxed, and nature left it to the opponent to determine why they were boxed.

The upheaval which resulted in the formation of the mountains to the west of Nebraska had the effect of cutting off the moisture supply from the Pacific. As a result, a tremendous change occurred in the water which fell upon that particular part of our country. With limited amounts of water available, coming from the Gulf, trees made an effort to establish themselves and so did the grasses. To the north, the type of tree which we think of as the fir, the hemlock and the pine were successful. To the south, the other type of tree, with which you are so familiar. In between, where the water supply was more limited, the grasses won the day. Had there been two and a half more inches of rainfall during the winter season, Nebraska would have been a forest land, but without that it became a grassland.

The eastern part of our state, with its more abundant water, therefore has a type of agriculture which depends upon water. The western part of our state has had to develop an economy on limited water supply. Here we find

20,000 sq. mi. of land known as the Sand Hills, a country which is covered with grass. Most of it has never seen the plow and, if we use the brains that God has given us, it probably never will.

We have, as of January 1952, 4,600,000 cattle. Therefore it is obvious that research concerned with forage crops and cattle will always be a very important part of the research program of the state of Nebraska.

I think it is important to ask ourselves, "Why are we so concerned with an ever-increasing food supply?" I think the answer is a very obvious one. We are concerned because of an ever-increasing population. If it should turn out that our own population rate of increase is maintained until 1975, the United States will have 190,000,000 people. Those 40,000,000 people who will come on the scene will have to be fed, and the impact upon our economy is bound to be great. The population problem is becoming an ever-increasing one all over the world. It behooves man to think and think clearly on this subject.

It is interesting, as someone has recently calculated, to discover that if Adam and Eve, the so-called primary parents of the human race, had started housekeeping 2,100 years ago, a little before the Birth of Christ, and had multiplied at the rate at which the population of the world is increasing today, the population of the world would have been 2,400,000,000 people, which is the population of the world today. We all know that they started housekeeping a great deal earlier than that.

If you assume that they started housekeeping 5,100 years ago—and the records of man go way beyond that—and increased at the rate at which the population is increasing today, the population of the world would be 1 with 23 zeroes after it. That is a figure so large that even the national debt seems small in comparison.

To get some idea of what that figure means, let us say that each one of those individuals weighed 100 lbs. Then the weight of the human population in the world would have been equal to the weight of the earth, and if you take the total area of the earth, and divide it among that population, each individual would have had a thousandth of a square inch to stand on.

These figures are given to you, not to convince you that



HUNDREDS ATTENDED

47th Banquet

featured were:

the speaker

DR. GUSTAVSON

entertainers

PURDUE GLEE CLUB

AND

sustainers

PRIME AGED SIRLOINS

Adam and Eve lived 5,100 years ago, but rather to try to point out in as dramatic fashion as I can, the population problem with respect to food supply.

The only reason that we have not suffered from a lack of food to any greater extent than we have, and the only reason that we have the wide open spaces still in some parts of the world, is that starvation, disease and war have been the great killers which have kept that population within certain bounds. If that population is to go on increasing at the rate at which it is now increasing, then mankind faces the very critical problem of continuing to look upon disease, war and starvation as the leveler, and the controller of populations or to find some other rational means for doing it.

We have a very high civilization in our country, and one of the reasons that we live at the high level we do is that a relatively small number of people can produce enough food to feed the rest of us.

In India, for example, 90 per cent of the time that is spent working is devoted to finding enough food for people to eat. In our country it is less than 25 per cent, so that in our country, everyone who produces food liberates at least three people to raise the standard of living in terms of doing the thousand and one things that make living more comfortable as you and I realize it. Did you ever stop to think that in India, if you took, let us say, 2,000,000 people from the agricultural work of that country and put them to carrying out other tasks, approximately 2,000,000 people would have to die of starvation over and above the number now dying. All of this is another way—which I hope is dramatic—of pointing out how serious is the relationship of food supply to populations. The amount of rise in culture is dependent upon the number of people that you can release from the production of food.

We are fortunate in our country to have the wide open spaces, to have the fertile soil and to have the inventive genius to develop the machines which have made possible the kind of agriculture we have. This has enabled us to develop the kind of civilization that we enjoy.

It is for this reason then that anyone who gives thought at all to what is going on in the world cannot help but think about the food-population problem. Realizing that our own country's population may increase some 40,000,000 within the next 25 years, one cannot help but ponder the problem with respect to our own country.

We are concerned about the grasses of Nebraska. We have devoted a good deal of time to them. The blue grasses in eastern Nebraska were destroyed during the drouth period of the thirties. Those blue grasses to a large extent have been replaced by grasses developed for eastern Nebraska, and brome grass stands out as an achievement. Alfalfa came to Nebraska in 1875. In 1905 we had approximately 200,000 acres devoted to producing alfalfa. Today, there are 1,483,000 acres devoted to the production of alfalfa.

With the advent of so-called bacterial wilt 25 years ago, we were forced to do some very serious research trying to develop a kind of alfalfa which would be resistant as far as possible to this destroyer.

As a result of bringing in plants from all over the world and studying their resistance to the disease, a small number of plants were found which did resist it. These became the germ plasm out of which was developed the so-called

ranger alfalfa, which has now spread far north—into Canada, as a matter of fact.

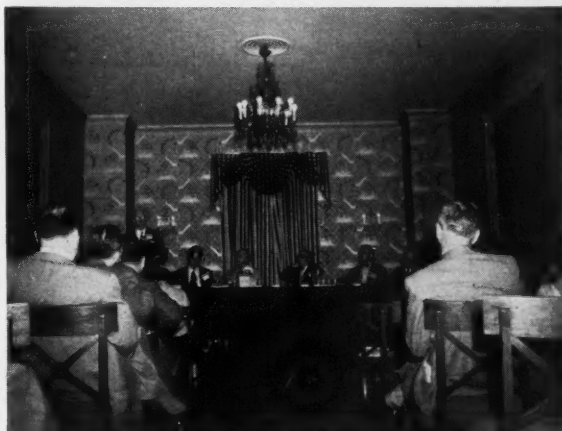
There is a demand at the present time for something like 20,000,000 lbs. a year, enough to cover a million acres, of this alfalfa. There is still much work that can be done with that ranger alfalfa, in order to make it a better food for our animals. We have already succeeded in developing some new strains which are better than the ranger alfalfa we had in 1942. At that time it analyzed about 18½ per cent protein and carried about 244 parts per million of carotene.

The newer alfalfas which have been developed by the processes of plant breeding are 6 per cent higher in protein and 4 per cent higher in carotene. Two-thirds of the protein of alfalfa is to be found in the leaves and today, one of the very serious problems we face is to take care of the diseases which destroy the leaves of our alfalfa plants.

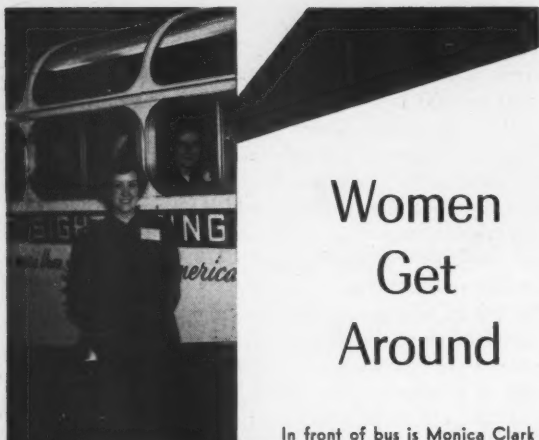
We have done a good deal of work in trying to preserve the native grasses of the Sand Hills. Experimentation has shown that the grasses that are native to that area withstand the drouth and are far more productive in food than the grasses that have been brought in. So, today, basic to our agriculture is the attempt to make this region self-sustaining in the sense that over the years to come, its productivity may not decrease.

The university is about to establish an experiment station on the Sand Hills. It will cover about 5,000 acres and be devoted primarily to the study of the grasses of that region. Plans are to grow perhaps 600 commercial cattle on the ranch in order to make studies concerning the grazing problems.

Anyone who studies, even in a superficial fashion, the cattle industry, cannot help but be concerned with the hereditary factors involved in the production of good cattle. It has been determined in a way that leaves no question that different strains within the same breed vary in their efficiency in the production of meat from food. Just to quote some figures from one of our stations in that region, using the group that came out of one sire,



Wesley Hardenbergh, president, American Meat Institute, was the feature speaker at the annual meeting of the Meat Industry Supply and Equipment Association. Continued cooperation between the two associations in their service to the meat industry was affirmed. A report was made on the accomplishments of the credit division of MISEA.



Women Get Around

In front of bus is Monica Clark of AMI, who was in charge of women's entertainment.



Special events included a tour of the Art Institute, a bus trip through the North Shore suburbs and a talk on meat cookery.



it was found that it was necessary to feed 690 lbs. of feed for every 100 lbs. of live weight produced in the animal. In another strain belonging to another sire, 849 lbs. were required to produce 100 lbs., a difference of 159 lbs.

This type of result has been obtained over and over again in the various studies that have been carried out not only in our stations, but in other stations in the Middle West. This has led us to establish at Fort Robinson a cattle breeding station. Fort Robinson was formerly a remount station that was operated by the army. It covers an area of about 23,000 acres.

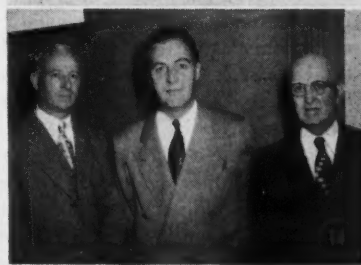
Today, the university is operating, in conjunction with the U. S. Department of Agriculture, a cattle breeding station on this 23,000 acres. I should like to tell you men that we have set up an experiment which I am just as sure is going to pay off as anything I can humanly be sure of. I only wish that all of you who are in the cattle business could work out as favorable a situation as we have.

We have 23,000 acres that were given to us. That was a good start. It is tax-free. That is even better. On trying to stock this with animals we went around to the cattle breeders of Nebraska, North Dakota, Wyoming, Colorado, Kansas and Iowa, and we now have about 600 very high-bred animals on the station; ten lines of Herefords and two lines of Black Angus. They were all given to us, so the basic investment was zero. And all I am trying to say to you is if that doesn't pay off, then the rest of you had better get out of business.

I do want to say it is this kind of cooperation between the university and the cattlemen of our part of the country that I believe is going to auger well for the kind of research that we are able to carry on. That research is going to involve the study of the efficiency with which these animals produce meat. It is pretty well established today that there is very little difference in the ability of animals of different breeds and different strains within breeds, to digest their food. Don't misunderstand me; food varies tremendously in its digestibility, but given a constant food supply with different breeds of animals, the differences in digestibility are not great.

There are, however, tremendous differences between different kinds of foods and their digestibility. We have carried out a great amount of experimentation in determining when to cut the grass, when to cut the alfalfa in order to get the maximum amount of digestibility.

This problem of making up a diet so as to obtain the maximum amount of gain for a given amount of food has concerned us and I just give you some results to indicate what some of the possibilities are. In one experiment, for example, which took place over 168 days, we got the following results: The native prairie hay was fed without any supplement for 168 days and resulted in a gain of 4 lbs. per head. In another experiment where prairie hay was also fed, but 1 bu. of corn per day added per head, 41 lbs. of gain was registered over the period of time. In a third experiment, the same prairie hay plus 1 lb. of supplement made up of 94 per cent corn and 6 per cent calcium phosphate resulted in about the same gain, 40 per cent. In a fourth experiment, the same prairie hay—but this time 87 per cent of the 1-lb. supplement was corn and 13 per cent urea—the gain 39 lbs. In a final experiment where the prairie hay was fed, but 1 lb. of supplement made up of 82 per cent corn, 6 per cent lime phos-



STROLLING AND TALKING

1. Miss Terri Specca, Emil Reichow, sr., and Emil Reichow, jr., partners, Oshkosh Sausage Co., Oshkosh, Wis.
2. Albert Young, superintendent, Henry Fischer Packing Co., Louisville; M. C. Phillips, vice president, The Griffith Laboratories, Chicago, and Carl T. Fischer, president, Henry Fischer Packing Co.
3. Thos. E. Wilson, chairman; G. B. Thorne, executive vice president, and E. F. Wilson, president, Wilson & Co.
4. D. A. Scott, vice president and treasurer, Brown & Scott Packing Co., Wilmington, Del.; L. B. Steele, manager advertising and film department, Du Pont, and E. R. Swem, *The National Provisioner*.
5. Julian Weil, vice president, and Leon Weil, president, Weil Packing Co., Evansville, and Walter Emge, Emge Packing Co.
6. M. T. Reardon, J. C. Roosman and R. H. Rooney, Krey Packing Co.
7. Elmer and Mrs. Nielsen, Marhoefer Division of Kuhner Packing Co. and Fred S. Stafford, John Wenzel Co.
8. J. R. Jones, Geo. A. Hormel & Co., Austin; G. J. Amshoff, president, Louisville Provision Co., and Norman Brammall, president, Food Management, Inc.
9. G. A. Kauzor, president, Kauzor & Co., Chicago; Andrew Kowzan and Charles Commeans, Du Quoin Packing Co.
10. I. R. Brenner, president, Foremost Casing Co., New York; Joseph Delayo, president, Angus Packing Corp., New York, and Sami Svendsen, Chicago.
11. E. N. Wentworth, director of livestock bureau, Armour and Company; Homer Davison, AMI, and E. G. Reed, Union Pacific.
12. E. Gooden, Dallas Packers Supply Co.; Roy Reed, Samuels & Co., Dallas, and W. A. Gee, Griffith Laboratories.
13. Jonas L. Pfaelzer, Jonas L. Pfaelzer & Co., Chicago; Sylvan Kadison and Harry Bobsin, Harry Bobsin & Co.
14. David Ganey, hog buyer, Delmore & Ganey, National Stockyards, Ill.; James L. Hall, manager, David Davies Co., Zanesville, Ohio; John Delmore, livestock purchasing agent, Delmore & Ganey.

phate and 13 per cent urea, the gain turned out to be 140-odd lbs.

I merely cite these figures to show you the tremendous differences that can be obtained by modifications of the diet.

This leads me then to the real message that I wanted to bring to you this evening. The University of Nebraska has established a meat laboratory so we can make very careful studies of the carcasses produced as a result of the experiments I have outlined. We have tried to carry this out in the past, but it wasn't easy because the studies involved interfering with operations in packinghouses. But now with a relatively modest packinghouse of our own we will be able to make these studies.

So, we are starting with studying the grazing grasses, the breeding of the animals, the diets which will give the maximum gain. In the meat laboratory these results will be analyzed. That, briefly, is the Nebraska story.

Let's ask ourselves what is this all about? Well, all of this work is designed, primarily, to give food to mankind. Outside of the energies involved, it is all aimed at trying to give man an adequate supply of certain fundamental building stones that we call amino acids. I am sure that most of you know that if you break protein down into its elements, you come out with about 22 fundamental building stones called amino acids. Some of them are absolutely essential to the diet, and some can be manufactured by the animal. Some of these amino acids can be built by bacteria. And the real reason why such substances as urea, which is a waste product of the body, will serve to help nourish cattle is because, in the rumen of the animal, there is this great bacterial synthesis going on. Here some of the essential amino acids which may be missing from the plant food the animal is getting are synthesized, as well as some of the fundamental vitamins.

Why is this so important? Well, it is so very important because this is the basis of human life. If a study is made of the kind of civilization that people have and enjoy, a close correlation exists between the quality and quantity of protein that people eat and their well-being. This very complicated process of converting grass into human beings is a process which is designed to produce the essential amino acids in sufficient quantity to nourish mankind. It is not only necessary for the building of the structures of the body—the muscles and all that go with them—but the work of Cannon of the University of Chicago, for example, has shown that these same amino acids are involved in the production of amino bodies that protect us against disease.

Going back, then, to the illustration that I used in the beginning, Huxley's picture of man playing with nature a game of chess where man's life is at stake and where man gets his ears boxed for making a mistake—as a result of careful research and careful thinking, man is increasingly winning that game. If you make a study of the amount of money that is being spent for agricultural research today, you will make the astounding discovery that the amount of money relative to the size of the industry is highly insignificant.

If you make a study of government's expenditures, for example, and take the increase in the sums that have been allowed to various government agencies during the past ten years, you will find that agricultural research has about doubled its money. This merely means that we

ALL AROUND THE PALMER HOUSE

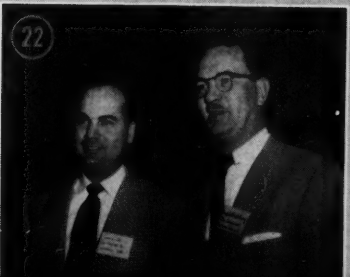
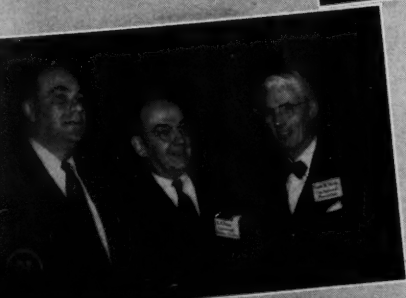
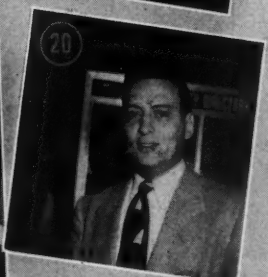
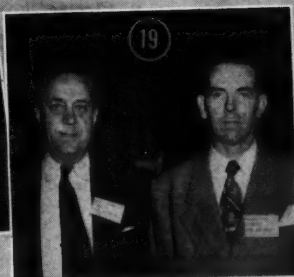
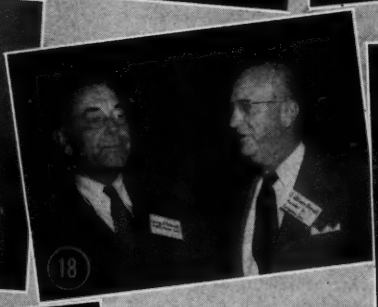
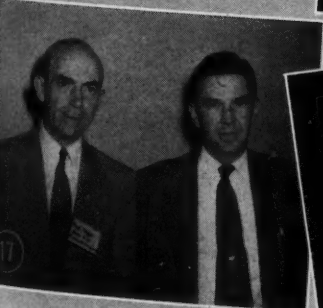
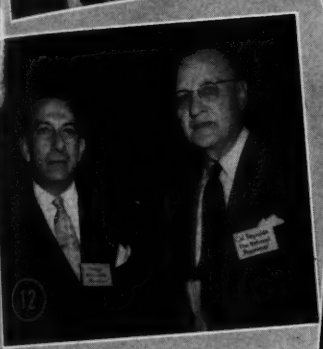
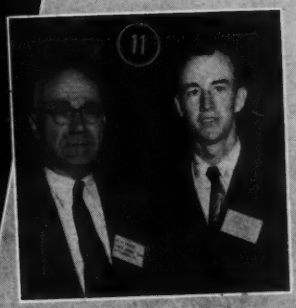
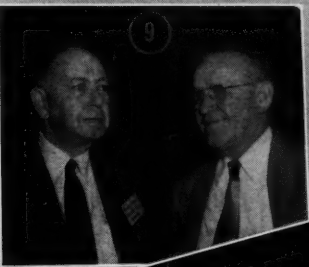
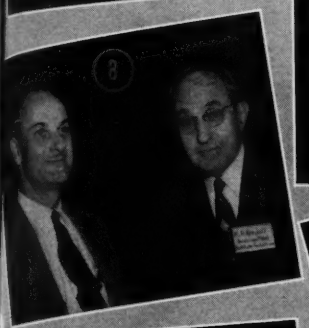
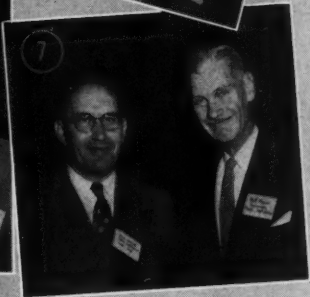
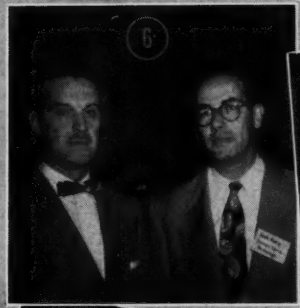
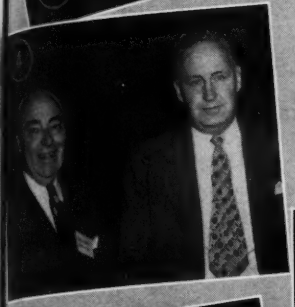
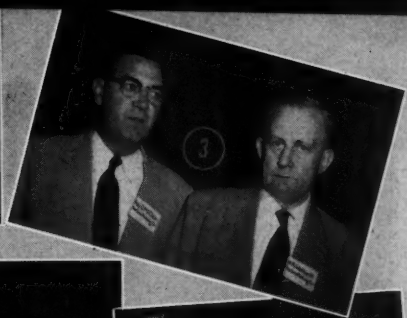
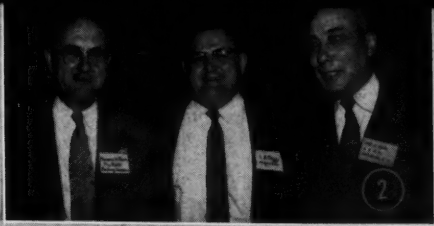
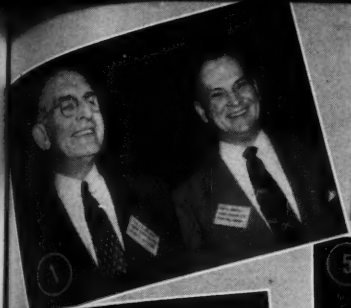
1. Chas. J. Maloney, Detroit, and Dow R. Conover, Hamilton, both of Essex Packers, Ltd.
2. Howard H. Rath, president, The Rath Packing Co., Waterloo, Ia.; L. B. Peggs, director of livestock procurement, Kingan & Co., Indianapolis, and Fred J. Beard, meat grading service, USDA.
3. Roy D. McClain, sales manager, and H. R. Wetherill, both of Lima Packing Co., Lima, Ohio.
4. Don Smith, advertising manager, and R. G. Haynie, vice president, both of Wilson & Co., Chicago.
5. Mrs. and R. G. Drees, sales, Preservaline Mfg. Co., Flemington, N.J.
6. J. D. Pepper, president, Pepper Packing Co., Denver, and Jack Karp, Sloman, Lyons Brokerage Co., New York.
7. A. W. Goering, president, Ideal Packing Co., Cincinnati, and Bill Reece, American Meat Institute.
8. H. A. Armstrong, chief of the division, information and service, and Dr. H. R. Kraybill, director, both of the American Meat Institute Foundation, Chicago.
9. Irving Sloman, Sloman, Lyons Brokerage Co., New York, and R. C. Theurer, president, Theurer-Norton Provision Co., Cleveland.
10. Bert JENNISON and Lorne Reynolds, both of L. N. Reynolds & Co., Toronto.
11. S. A. Granche and C. Frank, Allen Gauge & Tool Co., Pittsburgh.
12. L. Slobodien, division sales manager, Nocon Products, New York, and C. W. Reynolds, New York representative, The National Provisioner.
13. Al Davies, American Meat Institute, and U. S. Representative Jamie L. Whitten of Mississippi.
14. J. M. Foster, president, John Morrell & Co., Ottumwa, and R. A. Rath, chairman, Rath Packing Co., Waterloo.
15. Joe Shurilla, technical sales, and Mel Darack, treasurer, Dirigo Sales Corporation, Boston.
16. R. H. Gifford, retired, Swift & Company, Chicago, and J. C. Jacobs, retired, Armour and Company, Chicago.
17. Paul Mager, Wess Food Products Co., Chicago, and Hank Peiker, owner, Hank S. Peiker Co., Jacksonville, Fla.
18. Geo. A. Schmidt, chairman of the board, Stahl-Meyer, Inc., New York, and G. William Birrell, president, Kunzler & Co., Inc., Lancaster, Pa.
19. Al Steckman and Maynard Tipper, both of Tipper-Tie, Inc., Union, N.J.
20. Myron Snyder, packinghouse broker, Boston.
21. H. W. Wernecke, vice president and sales manager, The National Provisioner; A. A. Hess, Continental Electric Co., Chicago, and Frank N. Davis of the Provisioner.
22. Ira V. Lay, Lay Packing Co., Knoxville, Tenn., and Fred W. Stothfang, Cincinnati Butchers' Supply Co., Cincinnati.
23. May Denisman, general sales manager, and M. R. Slater, general manager, Wess Food Products Co., Chicago.

have kept pace with the decrease in the value of the dollar. But, other avenues of the government have had increases that go as high as—and I am not talking of the military now—900 times that spent on agriculture.

I think that the Institute which you people represent and support is one in which you should have the greatest pride. It is an Institute which the rest of us can look towards as a model, as an example of the importance that thinking people place upon scientific research.

The only reason I have for appearing before you tonight is to hope that each one of you will somehow become evangelists, will somehow become lobbyists, who will try to see to it that in view of the tremendous problems that face us in terms of population and food, we shall spend adequate sums on doing the kind of research necessary to keep the standard of living that we now have. It is going to take research to do it. On the other hand, if we keep on at the rate we are in food production, even doing the things that are evident, the standard of our living is bound to go down because we would not be keeping pace with the increase in population.

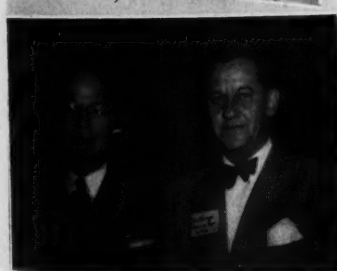
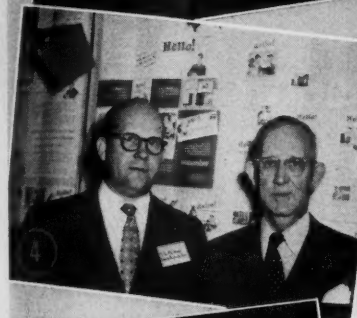
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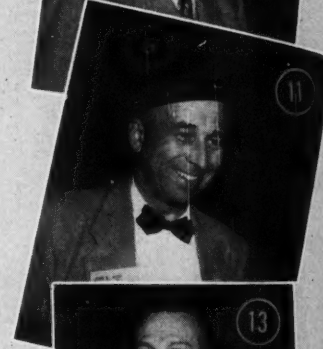
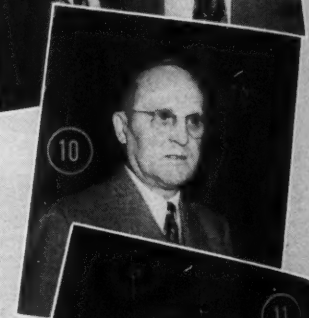
CONVENTION LINEUP

1. Dessert parade at the annual dinner.
2. Chuck Husting, vice president, Leo Burnett Co., Chicago; Vern Schwaegerle, advertising manager, American Meat Institute, and Philip H. Schaff of Leo Burnett.
3. John Krauss, president, John Krauss, Inc., Jamaica, New York; Frank Wardynski, Frank Wardynski & Son, Buffalo, and Geo. J. Harris, Casing Importing Co., Brooklyn.
4. J. B. Hawkins, manager, Lykes Bros., Inc., Tampa, Fla.; G. Henry Ottery, executive vice president, and Homer H. Smith, president, A. F. Schwahn & Sons Co., Eau Claire, Wis.
5. L. F. Long, president, Cudahy Packing Co., Omaha.
6. F. J. McNally, Chicago division manager; H. E. Schultz, Milwaukee; T. A. Bink, Chicago, and S. L. Perkins, division manager, Milwaukee, all of Oakite Products, Inc.
7. Sidney H. Rabinowitz, president, Colonial Provision Co., Boston, and H. R. Medici, vice president, The Visking Corporation, Chicago.
8. Clarence Fose, general provision manager, Oscar Mayer & Co., Madison; Walter Seiler, president, Karl Seiler & Sons, Inc., Philadelphia, and Adolph O. Baumann, owner, Commodity Appraisal Service, Chicago.
9. Ray Carroll, H. K. Hirsch, sales manager, and R. H. Marks, vice president, all of Enterprise Incorporated, Dallas, Texas.
10. J. R. McIntyre and John A. Julian, president, Julian Engineering Co., Chicago.
11. F. W. Specht, president, and Walter Schafer, vice president, both of Armour and Company, Chicago.
12. Gilbert J. Amshoff, president, Louisville Provision Co., Louisville, and John C. Milton, American Meat Institute.
13. R. R. Kraft, purchasing agent, David Davies, Inc., Columbus, and Hank Flonacher, Transparent Package Co.



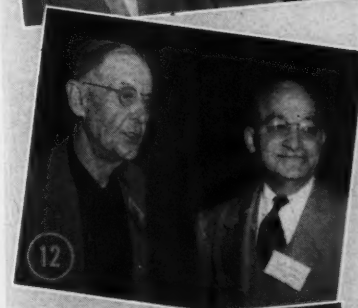
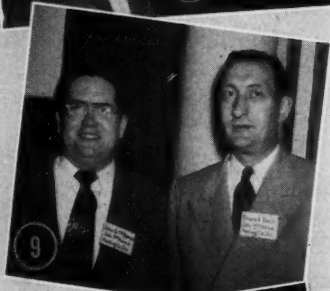
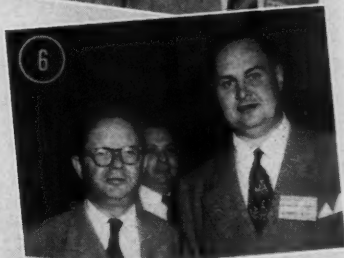
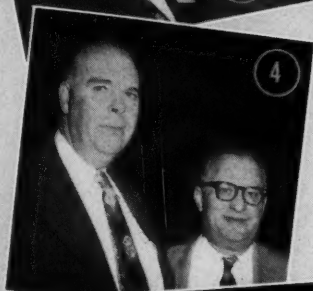
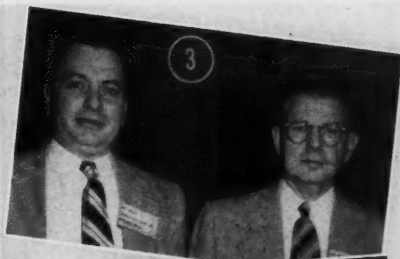
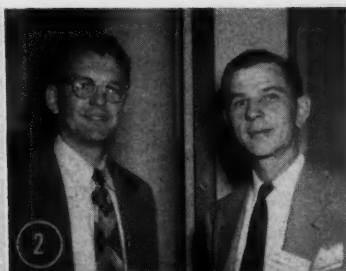
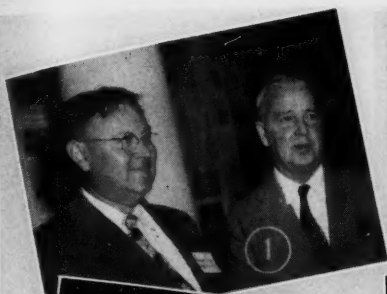
AND HOW YOU DOIN?

1. Henry Kuester, plant superintendent, R. E. Maynard Packing Co., Port Huron, Mich.; Dr. Robert Kuester, U.S. Navy, Great Lakes, Ill.; A. J. Dillon, Marhoefer Division of Kuhner Packing Co., Detroit, and Bill Rankin, sales manager, of R. E. Maynard.
2. Harold Kenna, Ray O'Brian and Chet Wolf, all of Transparent Package Co.
3. Joseph M. Dziminski, president, Greater Buffalo Meat Association, Buffalo, and S. Edgar Danahy, director of American Meat Institute and 50-year veteran, The Danahy Packing Co., Buffalo.
4. S. L. Perkins, division manager, Oakite Products, Inc., Milwaukee, and W. G. Moody, retired, Houston Packing Co., Houston, Texas.
5. Vic Figlar, vice president; John Max Weyer, president; Bill Weingarten and Jack Haug, all of Van Loan & Co., New York.
6. Sol May, president, and Sylvan E. May, vice president, both of Patent Casing Co., Chicago.
7. Phil Raymond, Chicago, and Sterling Groudel, Sellers Injector Corp., Detroit.
8. B. B. Mahon, jr., Louisville, and H. M. McIntosh, Chicago, both of The Girdler Corp., Votator division.
9. E. C. Corry, jr., secretary, and R. J. Beeson, president, Mather Stock Car Co., Chicago.
10. L. H. Davenport, manager, and Andy Anderson, sales manager, Arnold Bros., Chicago.
11. Bill Kaufmann, Felix Epstein, president, and Charlie Cox, all of First Spice Mixing Co. New York.
12. Mrs. and Harry H. Freedman, president, Midwest Textiles, Cincinnati, Ohio.
13. H. H. Kildee, dean emeritus, Iowa State College, Ames, and John Moninger, American Meat Institute.



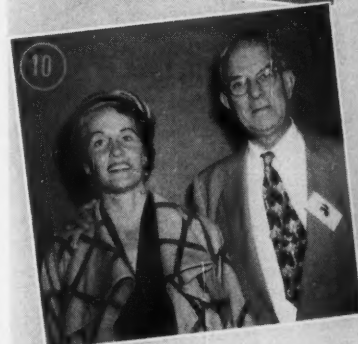
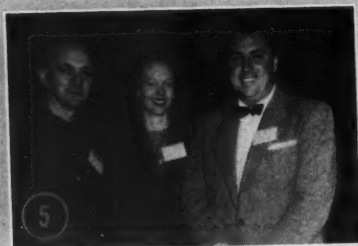
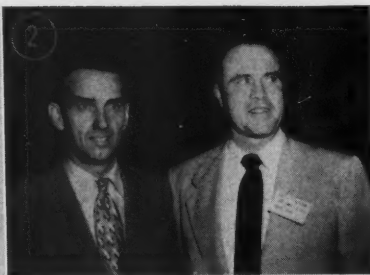
SEEN AND HEARD

1. Harry M. Shulman, consulting engineer, Detroit.
2. Tony Auth, president, Auth Bros., Washington, D. C.; J. O. Strigle, president, J. O. Spice & Cure Co., Baltimore, and Larry C. Morgan, manufacturing superintendent, Auth Bros.
3. Dan Flynn, Don Barraca, and John Overman, all of Transparent Package Co.
4. Edwin J. Ward, United Cork Companies, Chicago.
5. D. E. Stem, president, and Eric C. Anderson, sales manager, Cesco, San Francisco, and Ray Prickitt, sales representative, Chas. Abrams, Philadelphia.
6. E. Maynard Tipper, president, Tipper Tie, Inc., Union, New Jersey; Mrs. R. A. Hawley, Charles C. Hawley, treasurer, and R. A. Hawley, president, all of Meat Packers Equipment Co., Oakland, Cal.
7. Bert Freeman, Burns & Company, Ltd., Calgary, Canada; Frank A. Mayer, vice president, H. J. Mayer & Sons Co., Chicago.
8. Judge John Gutknecht, Chicago, and Al Freud, Berth. Levi & Co., Chicago. The well known jurist, who is the democratic candidate for states attorney in Cook County, Ill., and Freud have been good friends for many years.
9. Harry Chichester, Berth. Levi & Co., Chicago, and T. R. Selby, Michigan Biological Products Co., Detroit.
10. Ernest Draheim, manager, Daniels Manufacturing Co., Rhinelander, Wis.
11. John A. Wood, owner, Pikle-Rite Co., Pulaski, Wis.
12. Walter Windmueller, superintendent canned meats, The P. Brennan Co.
13. Milt Weiss, president, Milt Weiss Brokerage Co., New York.
14. C. Oscar Schmidt, jr., president, The Cincinnati Butchers' Supply Co., Cincinnati, and Herbert Slatery, jr., vice president, East Tennessee Packing Co.
15. Lee R. Swift, sales, Sylvania division, American Viscose Corp., Chicago, and W. E. Winans, packaging engineer, Armour and Company, Chicago.



ROUND AND ROUND WE GO

1. Oscar Emge, president, Emge Packing Co., Fort Branch, Ind., and N. J. Allbright, vice president, The Allbright-Nell Co., Chicago.
2. Henry Adams, Chicago, and Kass Wach, sausage superintendent, Neuhoft Bros. Packers, Dallas, Texas.
3. Wm. Wolfe, owner, Commercial Beef Co., Boston, and Ray Meserve, manager, Auburn Packing Co., Auburn, Me.
4. Jack Griffith, owner, John A. Griffith Co., Detroit, and C. A. Faye, district sales manager, J. S. Hoffman Co., Chicago.
5. Mrs. Ella Stock and Gerald Stock, Gordon Sausage Co., Detroit.
6. Jack Shribman, vice president, Premier Casing Co., Chicago, and Carl Schultze, president, New Hampshire Provision Co., Portsmouth, N. H.
7. Leo Barron, sales division, Rath Packing Co., Waterloo, and E. H. Berky, Quartermaster Market Center, Chicago.
8. Mrs. and G. E. Calhoun, general manager, Merchants Wholesale Meat Products Co., Marquette, Mich.
9. John G. McKenzie and Bruno A. Beck, both of John McKenzie Packing Co., Burlington, Vt.
10. Maxwell A. Cohen, president, Western Pork Packers, Worcester, Mass., and Hyman M. Cohen, president, Goren Packing Co., Boston.
11. Bob Dodrill, plant superintendent, and Dale McCarty, president, Flechtner Bros. Packing Co., Fostoria, Ohio.
12. R. G. Denton and J. M. Crandell, manager, both of the Rosevale Packing Co., Dewitt, Mich.
13. E. K. Wetzal, vice president, Stark, Wetzal & Co., Indianapolis, and Jim Baker, president, Baker, Johnson & Dickinson, Milwaukee.
14. Earl Plunkitt, plant superintendent, and Joseph Martin, foreman, H. A. Smith Markets, Port Huron, Mich.



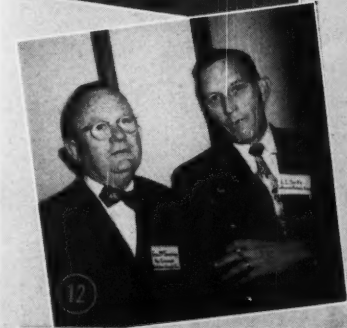
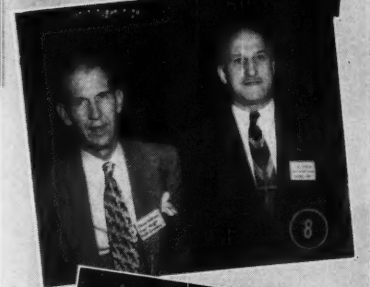
OLD FRIENDS, NEW FRIENDS

1. Wally Seelinger, vice president and general manager, Bay City, Mich.; Dorr Parshall, plant engineer, Chesaning, Mich., and Douglas Peet, secretary, Bay City, all of Peet Packing Co.
2. Martin Foral and Marvin F. Mullins, both of John Harvey & Co., Omaha.
3. John T. Madigan, vice president, Oscar Mayer & Co., Madison, Wis., and John A. Muth, vice president, Rath Packing Co., Waterloo.
4. B. B. Balentine, chairman of the board, and John P. Diercks, both of Balentine Packing Co., Greenville, S. C., and Earl Anderson, Wm. J. Stange Co., Chicago.
5. William Roberts, manager, Wimp Packing Co., Chicago; Mrs. Phil Somerville, Shellmar Products Corp., Mt. Vernon, Ohio.
6. Jos. J. Kolinger, casing department, Swift & Company, Chicago; and his two sons, Kenneth, an engineer with International Harvester Co., and William, an engineer with American Chemical Paint Co.
7. Al Egan and P. S. Brubaker, both of Smith, Brubaker & Egan, Chicago.
8. Mrs. Balkan and Frank Balkan, vice president, Balkan Packing Co., East Moline, Ill.
9. Mrs. and Russell H. Maas, chemist, Cudahy Bros. Co., Cudahy, Wis.
10. Mrs. and Harry Sparks, president, H. L. Sparks & Co., National Stock Yards, Ill.
11. H. J. Muenchen and Mrs. Bernice Kane, both market analysts, Armour and Company, Chicago.
12. Issy Kahn, Butchers Supply Co., Johannesburg, S. A., and Frank Heilbronner, export manager, Transparent Package Co., Chicago.
13. H. Walchak and W. H. Kane, Denman Rubber Mfg. Co., Warren, Ohio.



EAST COAST, WEST COAST

1. J. J. Driscoll, Pueblo, Col.; Charles Hutchinson, Transparent Package Co., Seattle, and A. D. Curtis, president, Pueblo Packing Co., Pueblo, Col.
2. C. C. Anderson, K. E. Wolcott and D. J. Kromm, Wilson & Co., Chicago.
3. H. E. Sparks, superintendent, and Wells E. Hunt, president, John J. Felin & Co., Philadelphia, and Henry Belz, vice president, Hunter Packing Co., St. Louis.
4. C. H. Settlege, Basking Ridge, N. J.; Frederick E. Busse, St. Louis, and Lou Menges, Lou Menges Organization.
5. Ralph Eisenschiml, and Seymour Goldfarb, Scientific Oil Compounding Co., Chicago, and J. H. Richardson, bacteriologist, Armour and Company.
6. Carl J. Zeitler, Seiloff Packing Co., St. Louis; Mrs. Zeitler and Carl J. Zeitler, jr. Chicago; William Manning, superintendent, Emmart Packing Co., Louisville, and E. C. Pfaffhausen, president, Industrial Air Conditioning Systems, Chicago.
8. Jack Bartley, general manager of engineering and construction, Rath Packing Co., Waterloo; J. W. Nelson, mechanical superintendent, John Morrell & Co., Sioux Falls, and Fred J. Avery, Materials Transportation Company, Chicago.
9. Steve Juratovic, Ac'cent, New York; Carl Graefing, maintenance engineer, and L. D. Horodenski, plant manager, John Krauss, Inc., Jamaica, N. Y.
10. Mrs. Ed. Auge, Ed. Auge Packing Co., San Antonio, with Mrs. and John T. Keene, general manager for Auge.
11. William Roberts, shipping and receiving; Clyde Emberton, fresh and frozen meats, and Earl Schwallie, manager of methods and standards, Kingan & Co.
12. O. F. Matthews, John Morrell & Co., Sioux Falls; Mrs. Matthews and Hyman Karp, director, Iowa Beef Co., Boston.
13. L. Weiner, Griffith Laboratories, Inc.; D. E. Schoenborn, general manager, Plymouth Rock Provision Co., and M. D. McGinnis, Visking Corporation.



FOOTSORE BUT HAPPY

1. Bill Schmidt, executive vice president, The Cincinnati Butchers' Supply Co., Cincinnati, and Greg Pietraszek, technical editor, *The National Provisioner*.
2. W. M. Willingham, president, Willingham Construction Co., St. Louis; John H. Bryan, Bryan Bros. Packing Co., West Point, Miss., and Stanley Knorth, president, O. Stanley Knorth & Associates.
3. Robert C. Munnecke, president, and Lee Gilleran, vice president, both of The P. Brennan Co., Chicago, and H. C. Dormitzer, general refinery superintendent, Wilson & Co., Chicago.
4. Pennie Davis, sales manager, Greater Omaha Packing Co., Omaha, and L. Wiedmaier, partner, Falls City Meat Co.
5. Alfred C. Gannon, assistant manager, P. D. Gwaltney & Co., Smithfield, Va., and J. R. Rupp, assistant manager of services, Kingan & Co., Indianapolis.
6. W. H. McCormac and L. W. Metzger, both of The V. D. Anderson Co.
7. Vernon A. Prescott, managing editor, *The NP*, and C. W. King, regional manager, Pure Carbonic Inc., Chicago.
8. Oliver Watson, Chicago district manager, and Wm. Scheurer, vice president, Exact Weight Scale Co., Columbus, O.
9. Mrs. and Charles Baker, owner, Baker's Boneless Beef Co., Henderson, Ky.
10. Phil Mayberry, superintendent, P. Conti & Sons, Inc., Rochester, N. Y., and Dick Shaw, president, United Packing Co., Wheeling, W. Va.
11. Miss F. Rottersman, secretary, and Henry Rottersman, president, Advance Oven Co., St. Louis.
12. Geo. McSweeney, The Cincinnati Butchers' Supply Co., Richmond, Va., and L. L. Smith, superintendent, Valleydale Packers, Inc., Salem, Va.
13. G. F. Frank, president, G. F. Frank & Sons, Cincinnati; Dolph J. Klieber and Ralph J. Tepe, both of Tepe Sausage Co.
14. J. Shappee and Jean Lesparre, new products dept., Armour and Company.

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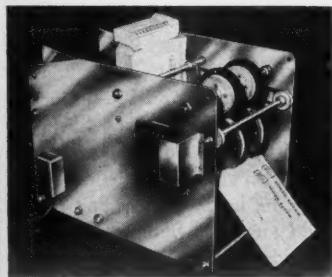
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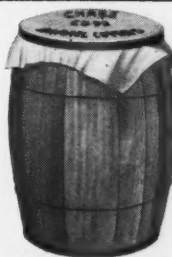
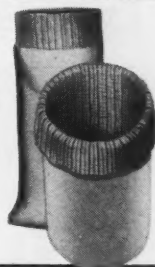


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W. SCRUGGS



W. H. SOUTTER



G. W. PETERSON



V. J. BULLEN



J. E. MOLLOY



J. B. PENSON



G. ANGSMAN



J. C. WINTERLIN



E. L. WILSON



H. KOOP



A. F. SCHULTZ



G. BARSH

HONOR 50-YEAR VETERANS

Presentation of awards to veterans who completed 50 or more years in the meat packing industry was made Monday morning by AMI Board Chairman H. H. Corey. Perhaps you will recognize some of the "old-timers" shown on these two picture panels.

S. EDGAR DANAHY, The Danahy Packing Company, Buffalo: Starting to work in 1902 for the company founded by his father and uncle, Michael and Matthew Danahy, he was given his first job in the stock yards and learned how to buy, sell and judge animals. He then moved into the packinghouse and went through all departments. S. Edgar Danahy was one of five brothers who eventually became officers and directors of the company. He is the lone survivor of these brothers. Danahy is president of the 65-year-old company and also is a director of the American Meat Institute.

EMMERT J. GAVIN, Geo. A. Hormel & Co., Austin, Minn.: He joined the Hormel company in 1902, when it had but a few hundred workers. For 34 years he has been foreman of the boiled ham department. Gavin has the distinction of being the oldest Hormel employe in point of service. When he isn't singing the praises of his company on week days, he lends dignity and tone to the choir of St. Augustine Church on Sundays.

WENDEL HOHLER, H. H. Meyer Packing Co., Cincinnati: Hohler started in the meat packing industry in 1901 in Graz, Austria. He came to the United States in 1904. His employment from that time to 1926 was with Cincinnati Butchers Abattoir, Sanders, Vogel, Kroger and E. Kahn's Sons. Since 1926, Hohler has been continuously employed at the Meyer plant.

CHARLES C. EICHHORN, Miller & Hart, Chicago: Eichhorn was born in Germany in 1887 and three months later was brought to this country by his parents. He got his first job in the industry with Miller & Hart in 1902, as a wrapper. He later became foreman of the jobbing department. He has worked for half a century in his present company.

WILLIAM S. CONN, Miller & Hart, Chicago: He obtained his start in the industry in 1900 at the Armour branch house in Des Moines as office boy. Four years

later Conn transferred his skill to the National Packing Co. in Philadelphia, and in 1909 went to work for Roberts & Oake, Inc. From 1912 to 1925 Conn sold meat for Geo. A. Hormel & Co. He then returned to Roberts & Oake and remained there until 1940. For the last dozen years Conn has sold meat for Miller & Hart.

WILLIAM J. GRAHAM, Miller & Hart, Chicago: Graham came to this country from Ireland in 1888. His first job was as an office boy in Swift's general offices. He was transferred to St. Joseph, Mo., in 1900 as a sausage maker. He left Swift to become foreman of the sausage department of Sulzburger & Sons. Mr. Graham was superintendent for Roberts & Oake for ten years and served two years with Louis Pfaelzer & Sons and five years with the Mutual Sausage Co.—all in executive capacities. For the last twenty-two years Graham has been a cost accountant with Miller & Hart.

HARRY W. DAVIS, John Morrell & Company, Ottumwa: Davis was born in Keswick, Ia., in 1887 and was educated in the public schools of Bloomfield, Ia., where his father operated a creamery owned by Morrell. He started with Morrell as a mail boy, moved to the order desk within a year and later to the paymaster's and billing departments. He was made head of the foreign department in 1909. In 1924 he was named general traffic manager, and elected to the board of directors in 1938. Davis has given much of his time to civic responsibilities of Ottumwa. He is a past president of the Rotary Club and the Ottumwa Chamber of Commerce.

GEORGE A. HESS, Oswald & Hess Company, Pittsburgh: Hess began his meat apprenticeship in Berlin, Germany, and progressed to a journeyman. Soon after he came to this country he operated a small sausage kitchen in the rear of his retail food store. His trade in sausage became so active that he sought larger quarters. Hess learned that a Mr. Oswald used only a small portion of a building for his boiled ham business. He rented the unused portion and his company prospered. Later, Hess and Oswald joined forces. This union expanded and outgrew several buildings. The firm's present plant has been remodeled three times to care for the business. Hess is chairman of the board of the company.

THOMAS B. BUCHER, Swift & Company, Chicago: Bucher's first position with Swift was in the produce department in 1902. Two years later he transferred to the payroll department and in 1910 he entered the superintendent's office and remained there for nine years. In 1919 he took over the duties of a supervisor in the table-ready meats department for two years. In 1921 Bucher returned to the plant payroll department and has been connected with this division for the last 31 years.

WADE SCRUGGS, Wilson & Co., Chicago: Scruggs went to work for Armour and Company, Kansas City, in 1902 in the casing department. He transferred to Swift at Kansas City three years later and, after acquiring skill as a butcher in the beef kill, he was sent to Swift's Omaha plant. In 1925 Scruggs was transferred to the Milwaukee plant where he continued to work in the beef kill. In 1934, Scruggs joined Wilson & Co. in the Chicago beef kill department. His hobbies are playing pool and singing in the senior choir of a Methodist Church.

WILLIAM H. SOUTTER, Swift & Company, Chicago: Soutter has been secretary of Swift & Company for ten years. Prior to his election to that office in 1942, he had



G.R. HALLGREN



O.O. COLLETT



W. SWIFT



A. PRUSHA



A.W. POWELL



E. SCOTT



O. H. BILL



W. HOFFMAN



G. GOLDSBERRY



W. E. THOMAS



E. M. CONNORS



O. WILLNER



M. SCHWEIZER



J. BLEILINGER



E. WIEPRECHT



J. LEUKERATH



E. SCHLUETER



G. WEICHOLD



J. ANDRE



SHOT AT RANDOM



been assistant secretary of the company for 26 years. Soutter joined Swift as a messenger when he was 14 years old in what was then the jobbing and advertising department. Before he became assistant secretary, Soutter was an assistant in the office of the late Louis F. Swift, then president of the company.

GEORGE W. PETERSON, Wilson & Co., Chicago: Starting with Morris & Company as a messenger "on the bench" in 1900, during the next ten years he moved around to Swift, Armour, Boyd Lunham, Lipton's, North American and Omaha Packing Co. He transferred to Schwarzschild & Sulzberger in 1911 as a receiving clerk and has served in the property department, warehouse accounting department, and is now supervisor of maintenance and building materials department. The last three jobs have, of course, been with Wilson & Co.

V. J. BULLEN, Swift & Company, Chicago: Bullen joined Swift in 1903 as a clerk in the account sales department at the general offices. He became a clerk in the consignment accounting department and in 1915 was transferred to the hide department in a similar capacity. In 1918 he was made assistant head of the by-products department and in 1919 was transferred to the tallow

department. In 1922 Bullen was made manager of the Tallow Department.

TOP TO BOTTOM, photos show L. F. Livingston of Du Pont giving demonstration during his address; Donald Lueck, Chas. Pfizer & Co., Inc., feeding week-old pigs with synthetic milk; Congressman W. R. Poage addressing Livestock section meeting; packers waiting at the coat check room, and AMI's giant thuringer, behind which stand A. R. White, Cudahy Packing Co., casing division; Wm. B. Walter, Armour and Company, casing division; J. A. Butorac, Geo. A. Hormel & Co., casing division, and F. I. Ryan, Cudahy Packing Co., casing division.

department. In 1922 Bullen was made manager of the Tallow Department.

J. E. MOLLOY, Armour and Company: Molloy got his start in the industry as a check boy at the timekeeper's office in 1902, where he worked nights for a year and a half. He worked successfully as foreman in the smoked meats department and foreman in the packing, but returned to the timekeeping department many years ago.

JOHN B. PENSON, JR., Armour and Company, Chicago: He started with his company in 1903 in the time office. He remembers his pay was \$6 weekly and the hours numbered 72. He went to the canned meats department as a student foreman in 1904 to learn cooking and processing methods. Mr. Penson has served in many departments of the company—branchhouse accounting, margarine and oleo department, car icing department, and North American freezer. In 1934 he returned to canned meats as foreman for the duration of his half century of work in the industry. Penson's father served Armour for 49 years until his retirement.

GEORGE ANGSMAN, Armour and Company, Chicago: Angsman started in the general office in September, 1902, as a clerk in the controller's division. In 1922 he was appointed manager of department accounting and was named head of the contract department in 1942. For the past six years, Angsman has been manager of the traveling expense department.

JOHN C. WINTERLIN, Armour and Company, Chicago: Winterlin started to work for Armour in 1901 in

the general office, where his father had worked until his death in 1899. Young Winterlin's first job was in the mail department, but he was soon transferred to the order and billing department. He later joined the livestock buying department. Shortly after World War I, Winterlin moved to dressed beef sales and has remained in that end of the industry without interruption.

UGENE BERNHARD, John McKenzie Packing Co., Burlington, Vt.: Bernhard, who was born in Germany, came to the United States in 1901. He worked in the meat business in metropolitan Boston for a dozen years. During the first term of President Wilson, Bernhard deserted Massachusetts for the Green Mountain state. Since that time he has worked constantly for the McKenzie company.

EMIL L. WILSON, Hunter Packing Co., East St. Louis, Illinois: Wilson started with Morris & Company, National Stock Yards, as a door boy in 1903. The next year, he liked the doors better at Swift's, and made the change. He tried out the doors at Armour for a few months before returning to Morris to work in the sheep and hog gang. He



SEATED: R. J. Gunderson, president, Roberts & Oake, Inc., Chicago; T. C. Tait, manager, canned foods, Swift & Company, Chicago; R. S. Hatfield, general manager, north central division, Continental Can Co., Chicago; D. W. Edwards, F. M. Stamper Co., St. Louis, and W. N. Cameron, vice president, central division, Continental Can Co., Chicago. STANDING: Frank Gill, area manager; Gen. C. A. Hardigg and N. M. Potts, district sales manager, all of Continental Can Co.

switched back to Armour for a job in the ham house and also on the express dock. In 1933, Wilson came to Hunter in the sausage manufacturing department and is now a sausage smoker.

HENRY KOOP, The E. Kahn's Sons Co., Cincinnati: Koop started work with the Roth Packing Co., Cincinnati, and stayed there 27 years. He served another three with the Cincinnati Abattoir, which purchased Roth, and then transferred to E. Kahn's Sons. He has continued there for 32 years.

ALBERT F. SCHULTZ, The A. Habermann Provision Co., Cleveland: Schultz got his start with the George A. Fowler Co. in Kansas City in 1902. In 1910 he went to the National Packing Co. at Omaha; to the Paul O. Reyman Co. of Wheeling, W. Va., in 1915; to the Cleveland Provision Co. in 1915, and to Theurer-Norton Provision Co. in 1933. Mr. Schultz transferred to Fried & Reineman at Pittsburgh in 1937, and to Val Decker in Piqua, Ohio, in 1940. He joined his present company in 1944 and is foreman at the plant.



SEATED: M. P. Cortilet, vice president, American Can Co., Chicago; Chris Marcan and J. H. Bender, provision department manager, both of Rath Packing Co., Waterloo; W. J. Foell, president, Foell Packing Co., Chicago. STANDING, First Row: D. B. Craver, sales manager; J. H. Hamilton, general sales, both of New York city; S. J. Austin, assistant district sales manager, all of American Can Co.; E. F. Paxson, general manager, canned meat division, John Morrell & Co., Ottumwa; Second Row: F. B. Newcomb, sales manager, central division; R. D. Folk, sales division manager; and T. K. Webster, district sales manager, all of American Can.

IRWIN H. KUEBLER, S. R. Gerber Sausage Co., Buffalo: Kuebler got his start with Swift in 1902, and remained with that company for the first five years of his career. For the next 29 years he was with S. R. Gerber, and for the following 16 years with the S. R. Gerber Sausage Co., Inc. Kuebler is vice president.

JOSEPH W. HOFFA, S. R. Gerber Sausage Co., Inc., Buffalo: Hoffa began in 1902 with the J. Rosenthal Co., Buffalo, and in 1906 went to Empire Provision for a year. Another year was spent with Hussey Brothers, and the next 13 years with Swift & Company. From 1921 to 1936 Hoffa was connected with S. R. Gerber and for the next 16 years with S. R. Gerber Sausage Co. Mr. Hoffa is sales manager.

GRANVILLE BARSH, Daniel Brothers, Inc., Columbia



FRONT ROW: Bob Schultz, Dobeckmum Co., Chicago; John Krucek, Asbestos Magnesite & Materials Co., Chicago; Lee R. Swift, W. B. Zemann and V. N. Winkler, all of Sylvania Division, American Viscose Corp., Chicago. Back: Lewis Morris, Sylvania Division, American Viscose Corp.; W. E. Winans, package engineer, Armour and Company, Chicago; Tom Derby; E. A. Burchard; Doris Kasper; P. Dreger, all of Sylvania Division, American Viscose.

Prominent Packing Industry Personalities on Parade

1. Harry J. Elliott, Louis J. Asmus, Marvin L. Asmus, sr. and Marvin L. Asmus, jr., all of Asmus Brothers, Inc., Detroit.
2. J. E. Harrison, assistant to the president, C. A. Durr Packing Co., Utica, and Mrs. Harrison with Mrs. and Felix Cris-tion, president, Packers Management En-gineering Co., Levittown, Pa.
3. R. F. Kielsen, O. E. Jung, Glen Fly, J. D. Jacobs and Frank R. Milici, all of the federal Meat Inspection Division, Chi-cago.
4. L. F. Livingston of du Pont displays some of the products of chemical research that mean "progress in better living."
5. Leonard D. Weill, secretary; Martin D. Levy, vice president; Harold Levi, treasur-er; William C. Ragals, vice president, and N. B. Berkowitz, all of Berth. Levi & Co., Chicago.
6. Joseph M. Dzimirski, president, Great-er Buffalo Meat Association, Buffalo; Bill Reece, staff member, American Meat In-stitute; S. Edgar Danahy, director of American Meat Institute and 50-year vet-eran, The Danahy Packing Co., Buffalo, and W. J. Van Valkenburgh, The Danahy Packing Co.
7. Charles Abrams, sales manager; Leon-

- ard Hantover, vice president, and Mrs. Charles Abrams, all of Phil Hantover Inc., Kansas City, Mo., and Joseph D. Pepper, vice president, Pepper Packing Co., Den-ver.
8. Oscar Emge, president, Emge Packing Co., Ft. Branch, Ind., and C. E. Field, president, Field Packing Company, Owens-boro, Ky.
 9. Frank Charniga, Vac-Tie Fasteners, Inc.; John F. Mottley and Joseph J. Frank, president, Hercules Fasteners, Inc., Elizabeth, N. J.; George V. Charniga of Vac-Tie Fasteners and Harry Maurer of Hercules Fasteners.
 10. J. O. Smith, sales promotion manager; P. A. Schuster; J. W. Crowley, and M. E. Hagel, executive vice president, all of Fearn Foods Inc., Franklin Park, Ill.
 11. F. W. Gage, production manager, St. Louis Independent Packing Co.; Carl E. Dorman, broker, Boston; Paul Cornelius, Cornelius Livestock Co., Coleville, Calif., and Wick Stephens, American Meat In-stitute, San Francisco.
 12. Lloyd Trafford, retired spice merchant; Carl Bruch, director; Mary Thimmesch, hostess; H. Walter Kuhl, research com-mittee member, and Marshall Neale, pub-

- licity counsel for association, all of Ameri-can Spice Trade Association, New York.
13. Max Chernis, president, Boston Sau-sage & Provision Co.; Sidney H. Rabino-witz, president, Colonial Provision Co., Boston; Herb Altheimer, Independent Cas-ing Co., Chicago, and Barry Miller, vice president, Boston Sausage & Provision Co.
 14. N. B. Berkowitz, Bob Sachs, Mike Bak-er, Al Freud and Duke Reichenbach, all of Berth. Levi & Co., Chicago.
 15. FRONT ROW: Nate Ulick, Mrs. N. Ulick and Alex Lavenberg. SECOND ROW: Leonard Shapin, Walter Wozniak and Fred Wilson, all of Berth. Levi & Co., Chicago.
 16. Mrs. Ray Paul, Mrs. A. D. Donnell and Mrs. Howard Rath, all of the Rath Packing Co., Waterloo, and Mrs. H. H. Corey, Geo. A. Hormel & Co., Austin.
 17. Walter B. "Mac" McCray, sales man-ager; Raymond Starr, president, and Joe Rigali, all of Koch Supplies, Kansas City Mo.
 18. Clem Zinck, plant manager, Arbogast and Bastian Co., Allentown, Pa.; John R. Galloway, sales manager, Bookey Packing Co., Des Moines, Iowa, and Emerson D. Moran, sausage consultant, Madison, Wis.

City, Ind.: Barsh really liked the business right from the start. During his spare time he would go to the slaughter-house and watch the gang kill cattle and hogs. He would perform small favors for the gang members and they would toss him a tongue, liver or heart. During 1901 Barsh went to work for L. Daniel who operated a meat market, and bought and sold livestock on the big markets. He has now been with the same company for 51 years, doing everything from shoeing horses to working in the sausage kitchen. Barsh recalls that in his early meat pack-ing experience he worked from 14 to 18 hours daily.

JAKE GYSIN, Jake Gysin & Sons Co., Alturas, Calif.: Gysin learned his trade in Basel, Switzerland. He is 76 years of age. He started work in this country in 1908 at Cedarville, Cal., and slaughtered, wholesaled and retailed products. Gysin and his three sons do a complete meat packing job, buying the animals and following them right down to the ultimate consumer.

GUST R. HALLGREN, John Morrell & Co., Ottumwa: Hallgren started to work in the pickle department in 1902 at the age of 15. He acted as chief clerk in the department for some time and during 1911 was made foreman. He still held the position at time of his fiftieth anniversary. (Hallgren retired from the company on May 1 of this year.)

OLIVER O. COLLETT, John Morrell & Co., Ottumwa: Collett started to work in the kill and cut department in 1902 and has continued to work in that department. He has two sons who are also employed by the company, Elmer A. Collett, canning department, and Elmo L. Collett, trimming room.

WILLIAM SWIFT, The Cudahy Packing Co., Omaha: Swift began his employment in the meat packing industry at the Omaha plant of Cudahy in 1902. His first job was in the box factory. Following that he held various jobs

in the plant until 1919 when he was made foreman of the machine shop. He was transferred to Wichita, Kan., in 1935 and three years later returned to Omaha as mas-ter mechanic. He has remained at Omaha ever since with the exception of temporary assignments which took him to Denver, Salt Lake City, and St. Paul.

ANTON PRUSHA, The Cudahy Packing Co., Omaha: Prusha first went to work for Cudahy at Omaha in 1901. Most of his jobs have been in the pork department, and he is presently employed as a trimmer in the pork cutting department. His entire Cudahy employment has been at Omaha.

A. W. POWELL, The Cudahy Packing Co., East Chi-cago, Ind.: Powell began his Cudahy career at Omaha as a clerk in the mail department. He subsequently held various positions in the consignment, timekeeping, em-ployment and other departments. In 1917 he was trans-ferred to the East Chicago plant, and in 1918 was made assistant superintendent. Less than a year later he was promoted to superintendent of the plant, a position which he holds at the present time.

EVERARD SCOTT, The Cudahy Packing Co., Los Angeles: Scott was first employed as an elevator operator at the Los Angeles plant of Cudahy. A short time later he was transferred to the pork killing and cutting depart-ment. Since that time he has worked in every department at Los Angeles. He was promoted to assistant foreman of the pork trimming department in 1934, and in 1944 became foreman of the pork killing and cutting depart-ment. Scott recently celebrated his forty-fourth wedding anniversary.

O. H. BILL, Krey Packing Co., St. Louis, Mo.: Bill entered the employ of Morris & Co. about 1900. In 1907 he entered Krey's employ as a car route salesman. He worked in this capacity for 15 years. In December, 1922,

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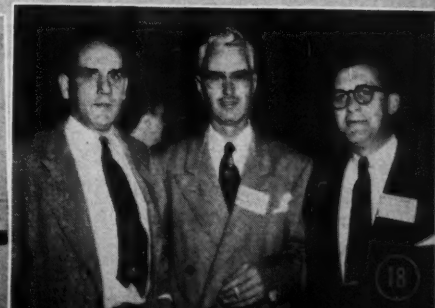
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Everybody Relax Until the Light Flashes!

1. Frank N. Davis, *The National Provisioner*; Paula Jo Finkbeiner and Joe Finkbeiner, secretary, Little Rock Packing Co., Little Rock, Ark.

2. E. Hertfelder, Dietz-Watson, Inc., Philadelphia; Mrs. Hertfelder, R. K. Kurze, president, Kadiem, Inc., New York; James A. Frank, Kadiem, Inc., Memphis, and Fred Stobe, president, Stobe & Peter Packing Co., New York.

3. Seymour Oppenheimer, president; Larry B. Tauber, sales manager, and Ed. E. Ellies, vice president, all of Transparent Package Co., Chicago.

4. H. T. Hoolbrook, manager Flex-Vac division; W. W. Roberts, sales manager Flex-Vac division; E. C. Domans, eastern sales manager, all of Standard Packaging Corp., Jersey City; J. W. Christian, executive vice president, The Cudahy Packing Co., Omaha, and Winston W. Yocum, manager of Midwest operations, Standard Packaging, Chicago.

5. Gus Wiehe, superintendent, and E. L. Elbersen, secretary, both of Eckert Packing Co., Defiance, Ohio.

6. Geo. Foster, Ted Lind, Ken Koepke,

Bruce Durling, Irving Zeiler and Al Fon-yo, all of Wm. J. Stange Co., Chicago.

7. C. J. Lafferty, jr., David H. Taylor, Ralph Garson, Robert H. Harrison, and Jack De Caprio, all of Dewey and Almy Chemical Co., Cambridge, Mass.

8. Paul Rosenfeld, president, Sayer & Company, Inc., Newark.

9. SEATED: Mrs. C. C. Kohlman, Mrs. Tim Murphy and Mrs. H. C. Seidler.

STANDING: C. C. Kohlman, foreman; Tim Murphy and H. C. Seidler, all of Norteman Packing Co., Wheeling, W. Va.

10. Mrs. Lewis Larson and Mrs. Clara Hoium, both of Minnesota Farm Bureau, Albert Lea; Mrs. John Olenschlager, Colonial Beef Co., Philadelphia; Mrs. J. C. Peters, John Peters Sons, Inc., Williamsport, Pa., and Mrs. W. J. Harbers, W. J. Harbers Co., Telford, Pa.

11. Frederick M. Tobin, president, Tobin Packing Co., Rochester, N. Y.

12. E. H. Skinner, purchasing agent, The Hull & Dillon Packing Co., Pittsburg, Kan.; E. S. Holmes, president, John R. Daily, Inc., Missoula, Mont., and E. D. Henneberry, president, The Hull & Dillon

Packing Co., located in Pittsburg, Kansas.

13. Paul Kunkel, president, and Peter Andress, treasurer, both of Fred Busch Sausage Co., Chicago; Mrs. P. Andress, Egon Hertz, Berth. Levi & Co., Chicago; Mrs. P. Kunkel and Walter Wozniak, Berth. Levi & Co.

14. Ray S. Paul, vice president, beef department, The Rath Packing Co., Waterloo; Homer Davison, vice president, and Al Davies, assistant to vice president, both of the American Meat Institute, and George Cook, president, Emmart Packing Co., Louisville.

15. Emil Meyer, Marty Lynn, and Bill Coilar, all of Transparent Package Co., Chicago; Bernard Cooper and Nat Pincus, vice president, both of Bernard S. Pincus Co., Philadelphia.

16. Bernard H. Seelbach and Karl C. Seelbach, president, K. C. Seelbach Co., New York.

17. Louis Albers, meat specialist, United States Air Force, Dayton; Ellard Pfaelzer, vice president, and Lex McGrath, sales superintendent, both of Pfaelzer Brothers, Chicago.

he accepted the position of car route sales manager, and served in that capacity until November, 1951, the time of his retirement.

WILLIAM HOFFMAN, Wilson & Co., Cedar Rapids: Hoffman has had extensive experience with many packers, starting with Cudahy in 1902. After a dozen years with that company, he worked successively for Independent Packing Co. and Swift in Chicago; Armour and East Side Packing Co. in East St. Louis; Wilson & Co. at Oklahoma City; Plover Packing in Dallas; Dold at Omaha; Wilson in Nebraska City; Hormel at Mitchell in South Dakota, and finally with Wilson & Co. at Cedar Rapids. He started there in 1933. Hoffman is a hog butcher.

GEORGE GOLDSBERRY, Wilson & Co., Cedar Rapids: Goldsberry started work for the Chicago Packing and Provision Co. at Nebraska City in 1901. When Wilson & Co. purchased this company, he remained and it wasn't until 1926 that he transferred to Hormel at Austin. He remained there until 1933, but came back to Wilson at Cedar Rapids as a splitter in the hog kill. He went to the hog cut in 1940.

W. E. THOMAS, Wilson & Co., Memphis: Thomas started with Morris & Company in 1901, and has worked successively for Cudahy, Swift, Dold, Cudahy at Jacksonville and Atlanta, and Abraham Packing Co., Memphis. Since 1950 he has served at the same plant under Wilson ownership. Thomas' career has taken him into the selling, operating and administrative levels of the industry.

ALLEN NASH, Wilson & Co., Cedar Rapids: Nash has been recognized among many as the dean of hog buyers. He started work in what is now the Wilson plant at Kansas City 50 years ago. He was later transferred to the Chicago plant and in 1930 went to Cedar Rapids. During his years with Wilson Nash has worked to bring about better understanding among producers and other

segments of the industry. For years he has judged local, state and national swine shows.

E. M. CONNORS, Armour and Company, Omaha: Connors started with Morris & Co. in Chicago in 1902 as messenger boy. By 1920 he was assistant plant superintendent and a year later was sent to the Armour plant at St. Joseph, Mo., in a similar capacity. In 1922 he was made plant superintendent at East St. Louis. Connors headed the industrial engineering department at the Chicago plant in 1923 and from 1933 to 1938 was assistant head of the quality control division. He was sent to the Omaha plant as superintendent in 1940.

OTTO WILLNER, Swift & Company, Jacksonville, Ill.: Willner began his career in the meat industry with the Jacksonville Packing Co. in 1898. Ten years later he moved to East St. Louis, where he worked with the East Side Packing Co. A year later, he returned to his former employer at Jacksonville in 1909 and remained with it when Swift purchased the plant. Mr. Willner has been a beef boner.

MAX SCHWEIZER, Berth. Levi & Co., Chicago: Schweizer went to work for Berth. Levi in 1890 when he was 22 years of age. He soon got a berth in the sales department and continued selling until 1935. Schweizer still continues as a consultant, although he is crowding 90 years of age.

ANDREW E. SCHEID, Tobin Packing Co., Fort Dodge, Ia.: Scheid has had an interesting work background since 1900 when he started his industry career with the S. Oppenheimer Co. at Marshalltown, Ia. He worked with Morrell at Ottumwa and with Cudahy at Wichita. Since 1911, Scheid has been foreman of the casing departments of Sinclair at Cedar Rapids, Hormel at Austin, Wilson at Albert Lea, Farmers Terminal Packing Co., Berth. Levi at St. Paul and Detroit, Drummond at Eau Claire, and Capitol at Denver. Since 1942 Scheid

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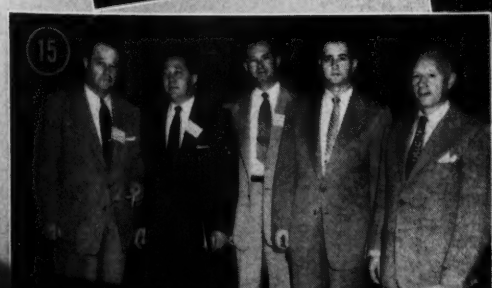
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They Came to Learn and Relax at the AMI Convention

1. E. P. Burke, vice president; Karl Symons, president, and R. F. Melchior, vice president, Agar Packing & Provision Corp., Chicago.
2. Clyde Greeno, sales engineer, Aluminum Cooking Utensil Co., Chicago.
3. Peter Kuntz, Kuntz Casing Co., Cincinnati; Frank W. Quinn, (52-year veteran) retired, Kingan & Co., Indianapolis, and Edward R. Seaberg, Edward R. Seaberg Co., Chicago.
4. William L. Lavin, vice president, Sugardale Provision Co., Canton, Ohio.
5. Jesse Reinking, livestock buyer; K. B. Drowatzky, office manager, Blackwell, Okla., and Harry Winkler, Tulsa, all of Turvey Packing Co.
6. Mrs. William J. Kappel; George A. Hess, chairman of the board, Oswald & Hess Co., Pittsburgh, and Mrs. George A. Hess.
7. Willard M. Thomas, general manager; C. E. Field, president, and B. J. Killian, assistant manager, all of Field Packing Co., Bowling Green, Ky.
8. Mrs. J. Boyd, secretary, Brantford, Ontario, and C. J. Maloney, Detroit, both of Essex Packers, Ltd.
9. L. W. Pfaelzer, president, Independent Casing Co., Chicago, and L. W. Pfaelzer, jr., Illinois Packing Co., Chicago.
10. Lewis Alderfer, owner, Harleysville Bologna Co., Harleysville, Pa.; J. O. Strigle, president, J. O. Spice & Cure Co., Baltimore, and Richard Moyer, foreman, Harleysville Bologna Co.
11. Albert Frey, president, L. A. Frey & Sons, Inc., New Orleans; Earl Noble, president, Noble's Butchers Supplies, Inc., New Orleans, and Lee J. Kenyon, president, Preservaline Mfg. Co., Flemington, New Jersey.
12. Robert Moore, chemical advertising manager, New York City, and J. M. Knight, chemical sales division, Kingsport, Tenn., both of Tennessee Eastman Co.
13. Ray Thelen, Calvin Royston, and Glenn Austin, all package engineers, Oscar Mayer & Co., Madison.
14. Daniel Dohm, jr., president, Dohm & Nelke, Inc., St. Louis, and Samuel Barliant, president, Barliant & Co., Chicago.
15. S. L. Brinton, sales manager, Stokes & Smith Co., Philadelphia.
16. George W. Smale, president, Smale Metal Products Co., Chicago, flanked by Agnes Olsem (left) and Mrs. Naomi Roberts, both with the Manufacturers' Cooperative Association.
17. Robert E. Davies, *The National Provisioner*, and Maynard E. Ackerman, sales representative, Cincinnati Cotton Products Co., Cincinnati.
18. B. B. Lochte, jr., assistant plant superintendent, The Wm. Schludenberg-T. J. Kurdle Co., Baltimore; J. B. McCrea, vice president, Ohio Provision Co., Cleveland, and Chester G. Newcomb, jr., superintendent, Cleveland Provision Co., Cleveland.
19. W. E. Oliver, general manager, and Harry Mackinson, both of Afral Corp., Chicago.
20. C. L. Hommedieu, Detroit, and O. C. Peterson, division sales manager, Ac'cent, Chicago.
21. John H. Adam, field engineer; Fred Wilcox, sales manager, and Ray T. Townsend, president, all of Townsend Engineering Co., Des Moines, Ia.
22. Gordon Cummins, sales manager, Union Plastic Film Co., a division of Transparent Package Co., and Chuck Hutchison, Transparent Package Co., Chicago.

has been working for the Tobin company at Fort Dodge, also as casing foreman.

JOHN BLEILINGER, Sieloff Packing Co., St. Louis: Bleilinger was born in 1888 in Hungary, and was a butcher apprentice and journeyman in Budapest and Segeten, Hungary. He moved to this country in 1906 and began work with the Sieloff company. He has been there ever since.

ERWIN WIEPRECHT, Sieloff Packing Co., St. Louis: Wieprecht learned his trade in Germany and came to this country in 1910. He served one year as a butcher on the Cunard Steamship Line, sailing between San Francisco and Australia, and finally settled in St. Louis. He has worked for the Sieloff company ever since.

JOSEPH LUEKERATH, Sieloff Packing Co., St. Louis: Luekerath learned the butcher trade in Germany and later worked in Siegburg, Switzerland, Cologne, Frankfurt and Bremerhaven. He came to the United States in 1922 and held a job as butcher on the North German Lloyd Steamship Line for a year. Since then he has worked for the Sieloff Packing Co.

EMIL SCHLUETER, Sieloff Packing Co., St. Louis: Schlueter was born in 1883 in Dortmund, Germany. He learned the butcher trade there and later worked as a journeyman at Elbe, Hamburg, Hagan and Vitten. He came to this country in 1922 and settled with the Sieloff company.

GEORGE WEICHOLD, Rath Packing Co., Waterloo: Weichold was born in Newark, N. J., in 1875, and moved to Waterloo in 1900. He has been meat cutter in Iowa City and Cedar Rapids and for a half century was employed at various meat markets there. Weichold has been a watchman with the Rath packing concern since 1940.

JOHN ANDRE, E. E. Mucke and Sons, Inc., Hart-

ford, Conn.: John Andre was born in Austria-Hungary in 1880. He was apprenticed for four years as a sausage maker when he was a young boy. He worked in Austria for seven years after he completed his training. He came to this country in 1905 and began work with Armour at Hartford, Conn. He later served with Grote & Weigle, Independent Packing Co., Backofen and Rockville. For the past 13 years he has been employed by the Mucke company, where he is still active.

EMIL (YANK) ANDERSON, Geo. A. Hormel & Co., Austin, Minn.: One of the best known packinghouse folks in Austin is Yank Anderson, expert trimmer in the company's hog cut department, who has worked steadily for the Hormel company for 52 years before retiring a few months ago. Actually, Yank is more than a 52-year veteran, because he carried handbills written by Geo. A. Hormel personally, and printed with Mrs. Hormel's help when Yank was a lad. This was before 1898. When Yank retired, he was the oldest active Hormel employee on the roster. For many years, when the late Geo. A. Hormel came back from his own retirement in California, one of the first things he did when he visited the Austin plant was to take a trip out to the hog cut and see Yank Anderson.

LEE GREBLING, Pueblo Packing Co., Pueblo, Col.: This 70-year-old meat packing veteran has spent more than half a century within our industry. He got his start with the Black wholesale meat company; switched to Cudahy Packing Co. at Omaha, and also spent 24 years with Capitol Packing Co., Pueblo, Col.

At a special ceremony during the American Meat Institute's annual dinner, the Institute's gold button was presented to J. S. McLean, who has completed 51 years in the industry. McLean is now chairman of the board of directors of Canada Packers Limited in Canada.

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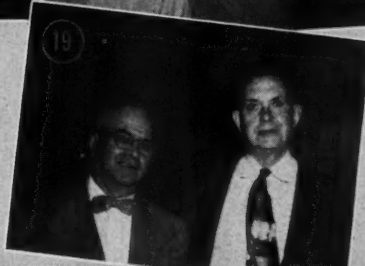
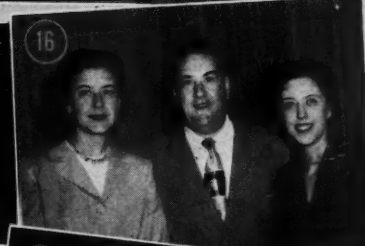
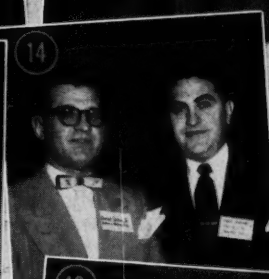
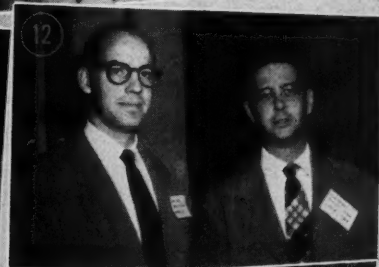
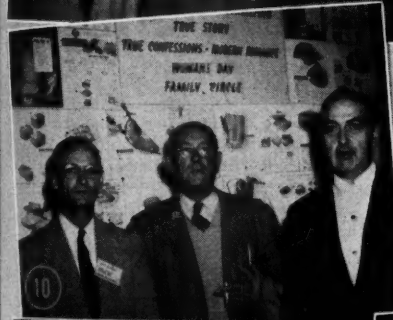
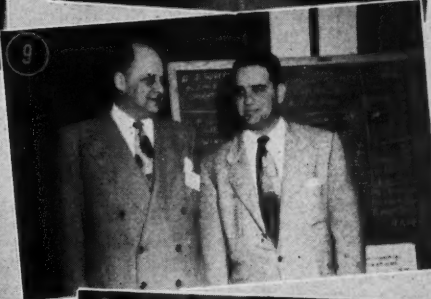
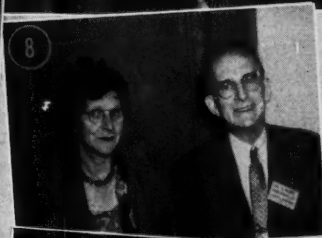
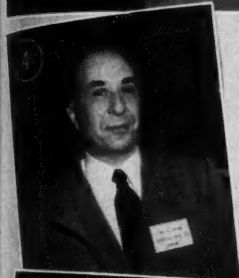
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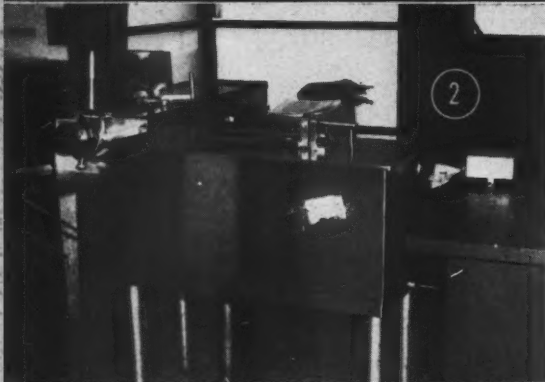
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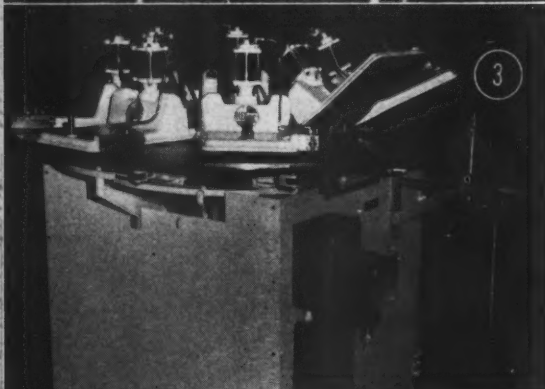
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EQUIPMENT REVIEW

Many new and modified packinghouse equipment items were displayed in the busy fourth floor exhibit hall. On these four pages **THE PROVISIONER** takes you on a camera tour, pointing out the latest in machines and process developments designed to do a better job for the meat industry.

THE FIRST MODEL of a complete line of filling and packaging machines fills, measures, twists and seals in one operation about 20 to 50 packages per minute. The unit can handle packages ranging in size from 6 to 20 oz. and in casings from 1 3/4 to 3 1/2 in. flat width. The device operates with any packaging material such as Saran Pliofilm or Polyethylene. The Globe Co., Chicago.

FOLLOWING STUFFING OF boneless smoked products into fibrous casings, new machine firmly pressure-packs product at rates up to 350 pieces per hour. The open end of the stuffed casing is pleated and placed in an aluminum closure. The machine crimps the closure, holding the casing firmly in position, then pneumatically forces product more firmly into the casing. At this point, operator pushes button and metal crimp seals casing. Irving Machinery Co., Philadelphia.

SEMI-AUTOMATIC unit vacuumizes and heat seals 40 packages per minute. An operator stands at the vacuum head open position, and feeds each of eight units as they travel past him in a circle. After product is positioned, the head of each unit lowers automatically, vacuum is drawn and the package heat sealed. Packages are discharged by a plow at the end of the cycle. Standard Packaging Corp., New York City.

POWER FOR THIS TRUCK refrigeration unit is supplied from the vehicle itself. Through a hydraulic multiple-disc clutch, power can be gradually taken up from the crankshaft, propeller shaft or live axle, depending on the most convenient location for the user. Foot clutch releases the power take-off system. While trucks are in the garage or at loading docks, etc., power is supplied by electric motor that derives its current from the vehicle battery. Kold-Hold Manufacturing Co., Lansing, Mich.

LARD CARTONS ARE formed and lined at the rate of 150 per minute with this machine. It can be readily adjusted to make 1-, 2-, 3- and 4-lb. cartons. Fully automatic, the machine discharges the complete carton on conveyor belt located 22 in. above the floor. Mechanism is easily accessible for maintenance. Peters Machinery Co., Chicago.

6 NEW BELLY INJECTION machine handles from 6 to 12 bellies per minute. Its 66 needles are forced into the belly under manual pressure by means of a hinged gate. After the needles have reached maximum penetration, an electrically powered pump forces the curing material into the belly under constant pressure. A perforated plate frees the injected bellies. Pickle overflow is filtered and reused. Preservaline Manufacturing Co., Flemington, N.J.

7 BAG FILLING MACHINE handles multi-wall Kraft paper, polyethylene coated bags at rate of 100 per hour. Factory stitched, top and bottom, the bags are closed by means of a patented valve. Having a capacity of 70 lbs., these bags can be used to carry meat trimmings and cracklings. St. Regis Paper Corp., New York City.

8 ELECTRONIC UNIT artery pumps hams with correct percentage of pickle. The pickle percentage is pre-selected on electronic controller shown at right of photo. As hams are placed on scale and needle inserted, operator starts unit on control panel. The correct percentage of pickle is injected regardless of ham weight. Toledo Scale Co., Toledo.

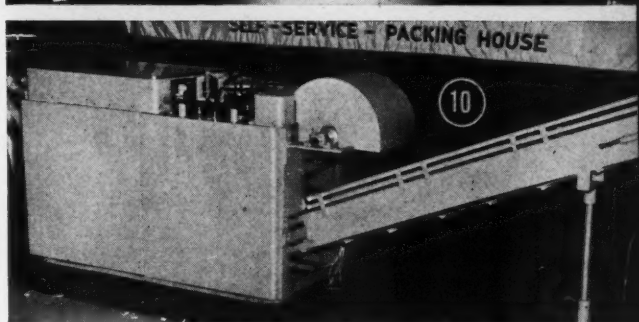
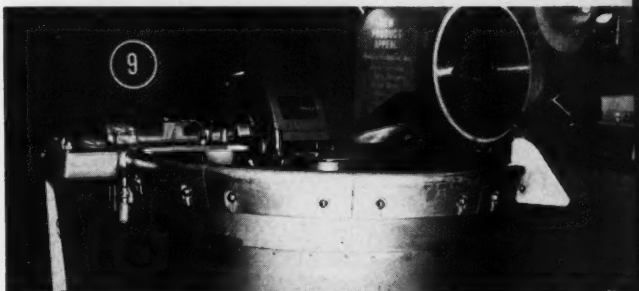
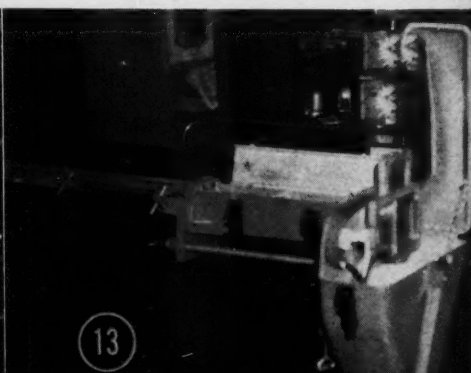
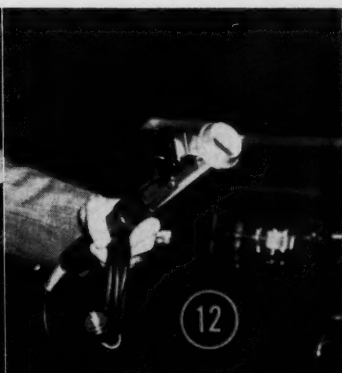
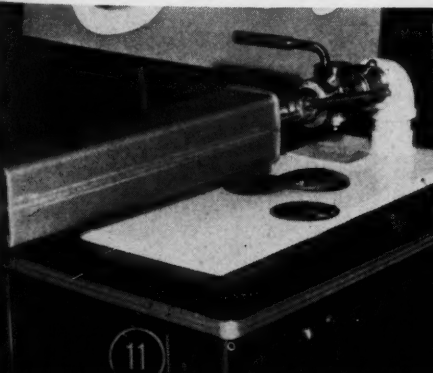
9 SILENT CUTTER features a micro-knife collar that assures positive setting and micrometer accuracy in changing or resetting. A rubber-edged disc unloader is counterbalanced for quick, smear-free unloading. Unit features central temperature control and automatic lubrication system. A full skirt has been added to provide greater sanitation. John E. Smith's Sons Co., Buffalo.

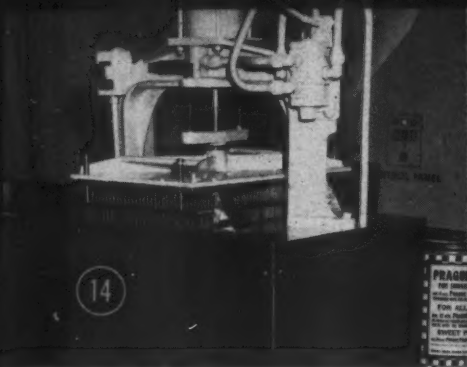
10 THIS MACHINE stretch-wraps and rosette-seals 12 to 14 packages per minute using 140 gauge Pliofilm. It can handle wieners, base-board shingled bacon, chunks and sliced meat products. Operated with compressed air at 75 ppsi. for the stretching of heated Pliofilm the device, complete with discharge conveyor, requires a total space of 10 ft. 6 in. by 3 ft. It is leased for a minimum base period of 35 weeks by Stokes & Smith Co., Philadelphia.

11 NEW BRAKE ON STUFFING horn permits stuffing of loaf meats at maximum pressures. The stuffer cock is made in one piece with a clip-on lock at the bottom and cutting edges at the port for positive flow shut-off. A special frame on stuffer horn holds new mold in position. The Allbright-Nell Co., Chicago.

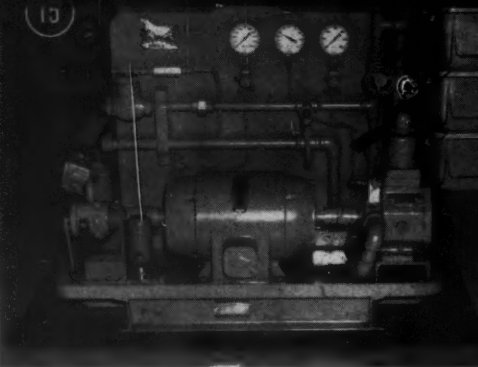
12 THERMOSTATIC CONTROL of the temperature at the head of this new brander assures a constant heat during branding. The brander picks up the correct amount of ink. Speed of application, temperature of product or room temperature do not affect the efficiency of the unit. Great Lakes Stamp & Manufacturing Co., Chicago.

13 HAND OPERATED CUBER can cube up to 150 lbs. of cooker or raw fat per hour. Device cubes fat into half and quarter inch sizes. With simple adjustment, the unit can make fat strips. A bar type latch cover permits quick loading of the cuber. K. C. Seelbach Co., Inc., New York City.





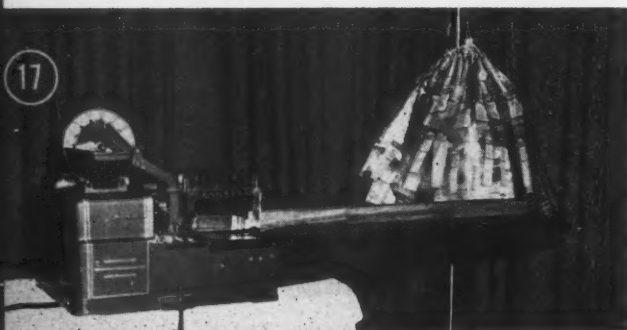
14 MACHINE FOR SPEEDING fancy dry cured bacon makes 1,600 openings 3/32 in. in diameter in each belly through needle penetration. The unit can handle seven bellies per minute. It operates on 175 ppi. hydraulic pressure. A stripper plate frees the belly on the upward stroke. The Griffith Laboratories, Inc., Chicago.



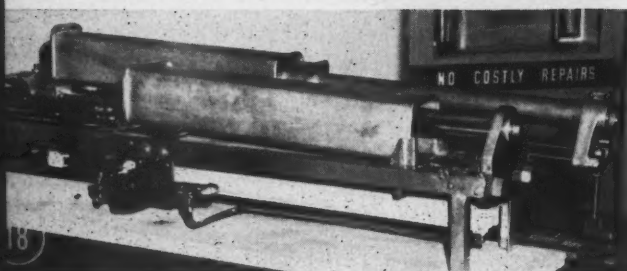
15 NEW HYDRAULIC PUMP can build up pressures to 10,000 ppi. for operating packinghouse machinery. Featuring automatic high-low hydraulic press action, the low pressure side raises piston to pressure position and radial high pressure side supplies final pressure. Cincinnati Butchers' Supply Co., Cincinnati.



16 PORTABLE PAN HOLDING racks are said to provide a versatile means of holding and handling certain meats. The units are sturdily constructed and yet can easily be moved about. They are said to be highly sanitary and rust proof. Each unit is self contained and can hold six pans of meats in cure. E. G. James Co., Chicago.



17 FIRST TIE RATES OF 1,000 per hour are claimed for this automatic electronic tying machine. Unit ties casing uniformly at the very tip of the casing with a metal cap clip, which then is center punched for stringing. Machine is activated by moving casing against an electronic bar. Metal clips are fed automatically from a wheel type hopper. Tipper Tie, Inc., Union, N.J.

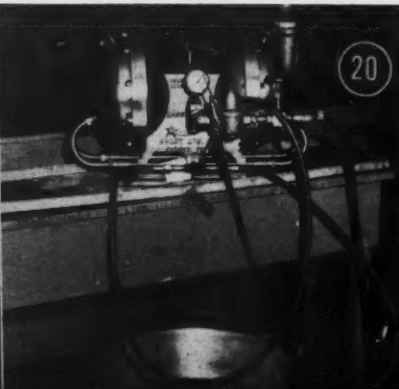
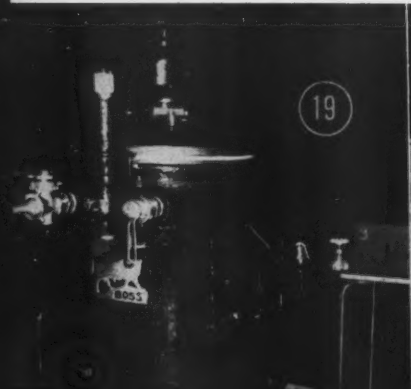


18 COMPANION PIECE TO Globe Co.'s long mold stuffer is the mold unloader. This device holds mold in place while air-operated plunger pushes cooked product from mold onto stainless steel plate. The unit is self contained within frame for mounting at slicing station. The Globe Co., Chicago.

19 NEW STUFFER FEATURES safety of operation. When lid is free of cylinder, stuffer receives only sufficient air pressure (5 lbs.) to lift piston. Stuffer has handle centering and locking device to assure correct alignment of the yoke. Its cylinder is semi-steel constructed. The Cincinnati Butchers' Supply Co., Cincinnati.

20 PICKLE PUMP uses 40 per cent less air than former models. It can pump at the rate of 300 gals. of pickle per hour under a constant air pressure of 40 to 60 ppi. or higher. Synthetic covering of diaphragm prevents oil seepage. One to eight lines can be fed from one pump. H. J. Mayer & Sons Co., Inc., Chicago.

21 THIS ROLLER FED unit forms and heat crimp seals flat packages of uniform or irregular shape. No baseboard is required for the packages. An electric eye controls register of imprinted design wrappings. The machine operates on a simple put-through cycle performed by one operator. It can handle transparent films, aluminum foil and waxed paper. General Machinery Corp., Sheboygan, Wis.

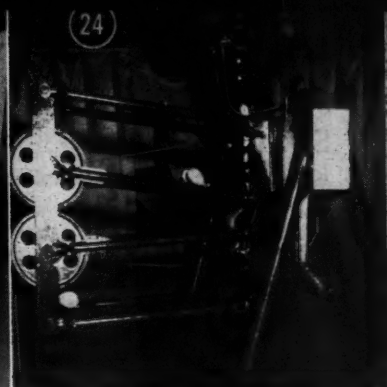




22 **TRUCK REFRIGERATION** unit features dual power. In on-the-road operation, unit is powered by gas engine. At the dock it can be operated by electric motor. Fully automatic, unit maintains desired temperature on a start and stop basis. It features a switch-operated hot gas defrosting system. U. S. Thermo Control Co., Minneapolis.

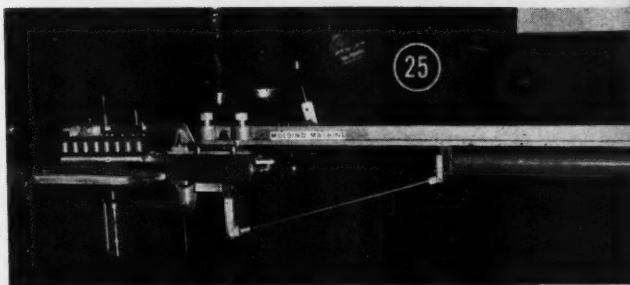


23 **RE-DESIGNED HAND** truck line features interchangeable wearing parts, light weight body, double sealed rim, pipe type safe grip handles, roller bearing wheels equipped with rubber thread and balanced weight distribution for ease of handling. The All-bright-Nell Co., Chicago.

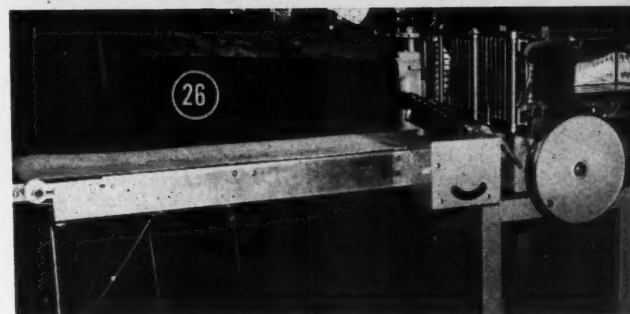


24 **NEW HOIST DEVICE** allows one-man loading of smokehouse trees or cages by lowering the entire cage to the level of the stockinetter or tier man. The unit has a total vertical travel of 39 in. and lifts 1,000 lbs. It automatically loads the trees on the rail. Meat Packers Equipment Co., Oakland, Cal.

25 **AIR-OPERATED SAUSAGE** device forms eight links to a half pound with each stroke. Attached directly to the stuffer it deposits formed links onto wallet type package. Rates of 15 to 25 packages per minute can be attained. Made of stainless steel, the unit is easy to clean and maintain. Basic Food Materials, Inc., Vermillion, Ohio.



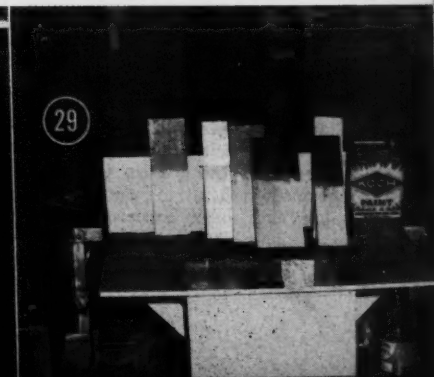
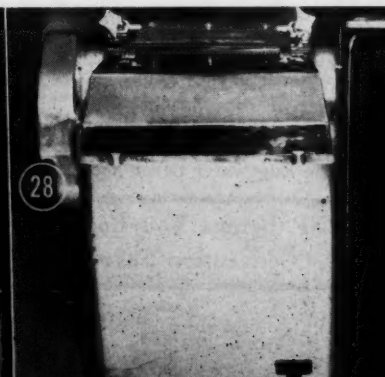
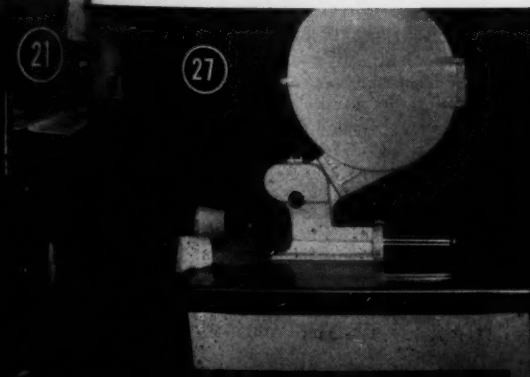
26 **ADJUSTABLE CONTROL** on counter permits slicing machine to stack luncheon meats in groups from four to 16 slices. The unit also can shingle the same amount of slices. Self sharpening stones mounted on the unit permit ready daily sharpening. Easily cleaned, the machine can slice sausage meats and bacon. U. S. Slicing Machine Co., Inc., La Porte, Ind.



27 **DESIGNED PRIMARILY** for crimping chub packages, this unit is equally suitable for other items such as butts. It can crimp 100 ties per minute. A cartridge contains 7,500 clips. Operated on 90 psi. air pressure, the unit can be reloaded quickly and clip casings having a flat diameter up to 3 1/2 in. The Globe Co., Chicago.

28 **THIS MACHINE** performs the dual task of fleshing and fattening hams. A collar knife places uniform depth of fat covering on ham. Constructed of stainless steel, the unit is easily adjusted to give desired fat covering, requires no special skill to operate. Townsend Engineering Co., Des Moines, Ia.

29 **A COMPLETE PAINT LINE** for the packinghouse features coverings that can be applied in temperatures as low as -50°F. The paints are said to be odorless, applicable over wet surfaces as well as dry and to dry in from one to three hours. Koch Supplies, Kansas City, Mo.



OPS Relaxes Several Record Keeping Requirements

OPS has suspended the requirement that livestock slaughterers report to the agency on the number of head and live weight of meat animals they slaughter during each accounting period. The reports have been filed with the national office on OPS Public Form 107 by Class 1 and Class 1A (federally inspected) slaughterers and with OPS field offices on Form DO 1-6 by Class 2 and 2A (non-federally inspected) slaughterers. The requirement is being suspended by Amendment 4 to DR 1, Revision 1, the livestock slaughter regulation. It became effective for accounting periods which begin after September 27, 1951.

In addition, the regulation has been amended to permit the registration of persons who slaughtered during the base period, January 1, 1950, to February 9, 1951, but who failed to register by the cut-off date, December 15, 1951. The cut-off date was eliminated in order to prevent hardship to slaughterers who were in business during the base period but who failed to register.

In another action in line with the agency policy of relieving industry of reporting requirements whenever possible, OPS discontinued the requirement that wholesale meat distributors designate the class of buyer and seller on each record or receipt relating to a wholesale meat transaction. Instead of indicating the type of transaction by use of a symbol, wholesale meat distributors will be required to maintain records sufficient to permit a determination of the class of buyer and seller. The change became effective October 15 by Amendment 20 to CPR 24, Amendment 11 to CPR 92 and Amendment 9 to CPR 101.

CPR 74, the wholesale pork ceiling price regulation, did not originally contain a symbol requirement. Under the amendment, the same record-keeping requirements apply to pork as to beef, lamb and veal.

The wholesale pork, lamb and veal regulations were also amended to permit sellers who began doing business before April 30, 1951, to qualify as hotel supply houses or combination distributors. This provision was included in CPR 24, wholesale beef regulation.

Excess Profits Tax May End

Secretary of the Treasury Snyder said there is a good chance Congress will let the excess profits tax die on schedule next June 30. However, he can see no other major tax cuts in the near future in view of the heavy defense spending scheduled for next year.

Snyder said the excess profits tax is "the most difficult tax to administer that has ever been conceived." It is almost impossible, he said, to make it equitable—to find a proper base period for all types of industry.

Retail Market News Helps Keep Prices Adjusted: USDA

According to a report by the USDA, accurate reporting of retail prices of foods is practicable. Consumers, retailers, wholesalers and others in Baltimore, said they found such a market news service beneficial and profitable.

Retail market reports were prepared and distributed in Baltimore weekly for a year and a half, covering about 130 food items. As a result, the report noted that retail prices were adjusted more adequately than before to price reductions made by wholesalers and shippers. This helped to relieve conditions of heavy supply. It was also noted that when demand caused retail prices to rise, wholesale prices strengthened more quickly than when the reports were not available, with the result that there was greater incentive to bring needed increased supplies into the city. Also, wide variations in retail price markups over wholesale levels were reduced, alleviating situations in which some commodities were required to pay the cost of marketing others.

Baltimore homemakers received the experimental weekly retail market news reports, as well as a separate sheet indicating a list of "best buys." The study revealed that 55 per cent of them used the information in their shopping. About 84 per cent of the retailers made use of the service, 49 per cent of the wholesalers and 28 per cent of the shippers to Baltimore.

Army Wants Raw Hides

The New York Quartermaster Purchasing Agency has opened bids for 40,880 lbs. of wet or raw slated cow hides, 42 to 50 lbs. average, and 122,640 lbs. of wet or green raw salted branded steer hides wanted for delivery by October 31.

The hides are intended for civilian supplies for Korea and must be suitable for making leather for the manufacture of shoes, bags and other commercial items. Bids should quote terms FOB, destination, which is port of embarkation, San Francisco.

Financial Notes

John Morrell & Co., has declared a dividend of 12½¢ a share on its common stock, payable October 30, 1952, to stockholders of record at the close of business October 10.

Hide Association Meeting

E. F. Forbes, president, Western States Meat Packers Association, will be the principal speaker at the annual dinner of the National Hide Association's annual meeting. The dinner will be held Tuesday evening, October 22, at the Edgewater Beach hotel, Chicago.

NP Brings You Complete Convention Coverage

OPS Is Considering Rolling Back Retail and Wholesale Beef Prices

According to numerous rumors from Washington, the Office of Price Stabilization is considering a proposal to lower price ceiling on Prime, Choice and Good grades of beef at wholesale and retail. Several requests have been made to OPS to take such action, due to the fact that retail meat prices have continued at about the same level during the past few weeks, while live animal prices have dropped substantially.

OPS claims that it has power under the Fugate Amendment to the Defense Production Act to roll back wholesale and retail prices of the top three grades. In addition, OPS has been asked by consumers to apply the Williams Amendment to beef. Under this amendment, when there is a price ceiling on an agricultural product and the price the farmers receives drops, OPS must see that the margins at both wholesale and retail levels are no wider than normal.

It has already been announced that OPS is preparing to roll back pork prices by November 1, in accordance with its plan to adjust pork prices on a seasonal basis twice a year.



A CHRISTMAS HAM BAG with a distinctive red and green design, with space for imprinting name, address and trademark of the packer in matching colors, is offered by Central States Paper and Bag Co., St. Louis. Besides its good looks, the bag boasts packing economies. It is so constructed that all the sheets commonly used are combined into a single sewed bag. The ham is easily inserted and the open end of the bag is folded over and sealed with a piece of acetate tape.

Meat Production With 6% Advance Establishes Week's All-Time Mark

MEAT PRODUCTION under federal inspection for the week ended October 11 reached the highest for any week since early March and established a record for any corresponding October period in the books. The U.S. Department of Agriculture estimated a

larger than a year ago.

Cattle slaughter amounted to 295,000 head compared with 276,000 the previous week and 240,000 last year during the same period. Output of beef rose to 158,700,000 lbs. from 148,200,000 lbs. the week before and 122,-

early May, and showed an appreciable increase over the 1,045,000 swine killed the previous week. Hog slaughter a year ago totaled 1,158,000 head. The heavier average weight accounted too, for the increase in pork output, which amounted to 149,400,000 lbs. compared with 141,700,000 lbs. the previous week and 147,100,000 lbs. last year from a larger number of animals. Total lard production amounted to 37,700,000 lbs. against 34,700,000 lbs. the week before and 39,600,000 lbs. a year ago.

Slaughter of sheep and lambs increased slightly to 279,000 head from 275,000 the preceding week, but stood far above the 240,000 killed last year. In terms of meat the foregoing numbers of ovines resulted in 12,000,000, 11,800,000 and 10,600,000 lbs. for the three periods respectively.

ESTIMATED FEDERALLY INSPECTED SLAUGHTER AND MEAT PRODUCTION

Week ended October 11, 1952, with comparisons

Week Ended	Beef		Veal		Pork (excl. lard)		Lamb and Mutton		Total Meat Prod.
	Number	Prod. mil. lb.	Number	Prod. mil. lb.	Number	Prod. mil. lb.	Number	Prod. mil. lb.	
Oct. 11, 1952	295	158.7	132	18.3	1,129	149.4	279	12.0	338
Oct. 4, 1952	276	148.2	124	17.4	1,045	141.7	275	11.8	319
Oct. 13, 1951	240	122.4	106	14.5	1,158	147.1	240	10.6	295

AVERAGE WEIGHTS (LBS.)

Week Ended	Cattle		Calves		Hogs		Sheep and Lambs		LARD PROD. Per 100 lbs.
	Live	Dressed	Live	Dressed	Live	Dressed	Live	Dressed	
Oct. 11, 1952	985	538	252	139	235	132	93	43	14.2
Oct. 4, 1952	980	537	255	140	240	136	92	43	13.3
Oct. 13, 1951	976	510	247	137	229	127	95	44	14.9

total output of 338,000,000 lbs. for a 6 per cent increase over the 319,000,000 lbs. the week before and 15 per cent more than the 295,000,000 lbs. in 1951.

Slaughter of all species was greater than the previous week with a larger proportion of the calf crop going to slaughter than in the past few years. Hog kill was only slightly smaller than last year, but higher average weights resulted in pork production a little

400,000 lbs. for the period a year ago.

Slaughter of calves was estimated at 132,000 animals for an 8,000-head advance over the week before and sharply more than the 106,000-head kill of a year ago. Production of veal reached 18,300,000 lbs. compared with 17,400,000 lbs. the preceding week and 14,500,000 lbs. last year.

Hog slaughter of 1,129,000 animals stood the highest for any week since

AMI PROVISION STOCKS

Total of all pork meat holdings for the two-week period ended October 11, declined 14 per cent below stocks reported on September 27, according to the American Meat Institute. Total pork stocks at 167,300,000 lbs. compared with 195,000,000 lbs. on September 27. A year ago these holdings were reported at 208,000,000 lbs. and the October 11, 1947-49 average at 143,000,000 lbs.

Total lard and rendered pork fat holdings amounted to 63,200,000 lbs. against 74,100,000 lbs. two weeks before and 40,300,000 lbs. a year ago. The two-year average was 61,200,000 lbs.

The accompanying table shows stocks as percentages of holdings two weeks earlier, last year, and 1947-49 average.

Oct. 11 stocks as Percentages of Inventories of Sept. 27 Oct. 13 1947-49

	1952	1951	Av.
BELLIES:			
Cured, D. S.	83	44	113
Cured, S.P. & D.C.	96	67	79
Frozen-for-cure, regular.	50	9	7
Frozen-for-cure, S.P. & D.C.	76	86	357
Total bellies	89	66	97
HAMS:			
Cured, S.P. regular	122	85	85
Cured, S.P. skinned	95	76	98
Frozen-for-cure, regular.	77	72	159
Frozen-for-cure, skinned.	91	75	95
Total hams	91	75	95
PICNICS:			
Cured, S.P.	98	85	76
Frozen-for-cure	78	146	300
Total picnics	88	105	169
FAT BACKS:			
D.S. CURED	79	156	127
OTHER CURED AND FROZEN-FOR-CURE			
Cured, D.S.	96	96	128
Cured, S.P.	94	73	83
Frozen-for-cure, D.S.	46	129	53
Frozen-for-cure, S.P.	70	156	263
Total other	81	95	112
BARBELED PORK			
TOT. D.S. CURED	92	122	122
TOT. D.S. CURED ITEMS			
TOT. FROZ. FOR D.S.	47	44	23
TOT. S.P. & D.C. CURED.	96	71	87
TOT. S.P. & D.C. FROZ.	75	44	23
TOT. CURED & D.C. FROZEN-FOR-CURE	88	75	105
FRESH FROZEN			
Loins, shoulders, butts and spareribs	67	166	264
All other	88	92	212
Total	76	118	235
TOT. ALL PORK MEATS	86	80	117
RENDERED PORK FATS	91	74	59
LARD	85	163	106

CUTTING MARGINS ON HEAVY HOGS BETTER; OTHERS LOSE

(Chicago costs and credits, first three days of week)

Irregular price fluctuations on pork caused cutting margins on live hogs to decline in the two lighter weight classes, while the heaviest kinds gained on the strength of comparatively better prices for the more weighty meat cuts from the bigger hogs.

This test is computed for illustrative purposes only. Each packer should figure his own test using actual costs, credits, yields and realizations. The values reported here are based on the available Chicago market figures for the first three days of the week.

—150-220 lbs.—				—220-240 lbs.—				—240-270 lbs.—				
	Pct. live	Price per lb.	Value per cwt. live	Pct. live	Price per lb.	Value per cwt. live	Pct. live	Price per lb.	Value per cwt. live			
	wt.	fin. yield	fin. yield	wt.	fin. yield	fin. yield	wt.	fin. yield	fin. yield			
Skinned hams	12.5	45.9	\$ 5.74	\$ 8.81	12.5	46.5	\$ 5.81	\$ 8.23	12.9	47.6	\$ 6.14	\$ 8.72
Picnics	5.6	28.8	1.61	2.33	5.4	27.5	1.48	2.10	5.3	27.7	1.46	2.05
Boston butts	4.2	35.8	1.51	2.20	4.1	35.0	1.46	2.03	4.1	35.0	1.46	2.00
Loins (blade in)	10.1	47.5	4.80	6.94	9.8	47.5	4.66	6.60	9.7	47.0	4.56	6.30
Lean cuts			\$13.66	\$19.78			\$13.41	\$18.96			\$13.62	\$19.07
Bellies, S. P.	11.0	27.4	\$ 3.01	\$ 4.36	9.5	27.4	\$ 2.60	\$ 3.75	3.9	28.0	\$ 1.09	\$ 1.59
Bellies, D. S.					2.1	25.0	.53	.75	8.5	25.0	2.17	3.00
Fat backs					3.2	7.3	.23	.33	4.5	8.5	.38	.54
Plates and jowls	2.9	11.8	.35	.51	3.0	11.8	.36	.50	3.4	11.8	.41	.58
Raw leaf	2.2	9.0	.19	.29	2.2	9.0	.19	.28	2.2	9.0	.20	.29
P.S. lard, rend. wt.	13.7	8.4	1.15	1.67	12.2	8.4	1.02	1.45	10.1	8.4	.85	1.23
Fat cuts and lard			\$ 4.70	\$ 6.83			\$ 4.03	\$ 7.06			\$ 5.10	\$ 7.23
Spareribs	1.6	35.0	.61	.87	1.6	27.0	.43	.62	1.6	22.0	.35	.49
Regular trimmings	3.2	22.7	.73	1.07	2.9	22.7	.60	.87	2.8	22.7	.64	.94
Feet, tails, etc.	2.0	7.8	.16	.23	2.0	7.8	.16	.23	2.0	7.8	.16	.24
Offal & misc.			.55	.80			.55	.79			.55	.78
TOTAL YIELD & VALUE	69.0		\$20.41	\$29.58	70.5		\$20.14	\$28.63	71.0		\$20.42	\$28.75
		Per cwt. live				Per cwt. live				Per cwt. live		
Cost of hogs		\$19.41		Per cwt. fin. yield		\$19.48		Per cwt. fin. yield		\$19.48		Per cwt. fin. yield
Condemnation loss		.10				.10				.10		
Handling and overhead		1.20				1.06				.96		
TOTAL COST PER CWT.		\$20.71		\$30.09		\$20.64		\$29.27		\$20.54		\$28.93
TOTAL VALUE		20.41		29.58		20.15		28.63		20.42		28.75
Cutting margin		-.30		-.42		-.49		-.64		-.12		-.18
Margin last week		+ .12		+ .17		-.17		-.23		-.36		-.60

Beef Cold Storage Holdings Rise In September; Pork Declines Sharply

COLD STORAGE holdings on September 30, of the generally bigger-volume meat stocks as beef and pork indicated some irregularities as to direction of movement, in or out of stor-

generally higher than the five-year averages on September 30.

Beef stocks rose to 167,093,000 lbs. from 156,762,000 lbs. at the close of August and 93,988,000 lbs. on Septem-

August and 311,690,000 lbs. at the close of September, last year. Fresh pork accounted for the bigger share of this kind of meat at 143,005,000, 240,970,000, and 131,262,000 lbs. for the three dates, respectively, excluding the five-year average.

Lard stocks, at 105,004,000 lbs., while greater than the September 30, 1951 holdings of 25,422,000 lbs., were less than August 30 inventories of 122,438,000 lbs. The five-year average was 68,779,000 lbs.

Cold storage holdings of lamb and mutton, reflecting the bigger monthly kills of this year, rose to 12,284,000 lbs. from 11,318,000 lbs. at the close of August, 6,627,000 lbs. at the end of September, last year, and 7,621,000 lbs., the five-year average.

Veal also gained, reaching 12,661,000 lbs. against 10,678,000 lbs. a month before and 8,020,000 lbs. last year. The five-year average was considerably less at 7,652,000 lbs.

Canned meat and meat products of 28,689,000 lbs. showed an increase compared with last year's 26,197,000 lbs., remained below the 36,744,000 lbs. of such commodities at the close of August, this year, but were more than the five-year average of 20,992,000 lbs.

Sausage room products dropped to 15,393,000 lbs. from 16,426,000 lbs. on August 30, but showed an increase compared with the 13,389,000 lbs. last year. The five-year average in this category was recorded at 12,023,000 lbs.

U. S. COLD STORAGE STOCKS, SEPTEMBER 30

	¹ Sept. 30, 1952 1,000 pounds	Sept. 30, 1951 1,000 pounds	Aug. 30, 1952 1,000 pounds	5-yr. av. Sept. 30 1,000 pounds
FROZEN AND CURED MEATS:				
Beef, frozen	158,915	87,066	148,196	70,487
Beef, in cure and cured	8,178	6,922	8,566	9,187
Total beef ²	167,093	93,988	156,762	79,674
Pork, frozen	143,005	131,262	240,970	84,676
D.S. in cure and cured	28,917	40,530	39,709	30,504
S.P. in cure and cured	114,259	139,389	126,579	125,217
Total pork ²	286,181	311,690	407,558	240,397
Lamb and mutton, frozen	12,284	6,627	11,318	7,621
Veal, frozen	12,661	8,020	10,678	7,652
All offal	57,301	45,572	61,579	45,575
Canned meat and meat products	28,689	26,197	36,744	20,992
Sausage room products	15,393	13,389	16,426	12,023
Lard	105,004	25,422	122,438	68,779
Rendered pork fat	1,679	2,465	1,858	2,730

¹NOTE: These holdings include stocks in both cold storage warehouses and meat packing plants. Preliminary figures. Revised figures will appear in next month's report.

²The Government holds in cold storage outside of processors' hands, 39,287,000 lbs. of beef, 18,591,000 lbs. of pork, and 581,000 lbs. of lard.

age during the month of September, a U. S. Department of Agriculture report indicated. Total beef stocks gained, over both the month previous and last year, while pork decreased from both previous periods. All commodities were

ber 30, 1951. This year's holdings were also considerably above the five-year average of 79,674,000 lbs. on that date.

Aggregate pork stocks decreased sharply to 286,181,000 lbs. from 407,558,000 lbs. recorded at the close of

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MEAT and SUPPLIES PRICES CHICAGO

WHOLESALE FRESH MEATS CARCASS BEEF

Native steers	Oct. 14, 1952
Prime, 600/800	54¢
Choice, 500/700	53 1/2¢
Choice, 700/900	51 1/2¢
Good, 700/800	44 1/2¢
Commercial cows	52 1/2¢
Can. & cut.	26 1/2¢
Bulls	33

STEER BEEF CUTS

Prime:	
Hindquarter	65.00@66.0
Forequarter	59.00@61.0
Round	59.00@61.0
Trimmed full loin	91.0*
Flank	14.00@16.0
Regular chuck	50.00@53.0
Fore Shank	25.00@28.0
Brisket	35.00@37.0
Rib	70.00@72.0
Short plate	23.00@24.0
Back	62.00@63.0
Choice:	
Hindquarter	60.00@63.0
Forequarter	45.00@47.0
Round	59.00@61.0
Trimmed full loin	83.0
Flank	14.50@18.0
Regular chuck	50.00@53.0
Fore Shank	25.00@28.0
Brisket	35.00@37.0
Rib	60.00@65.0
Short plate	23.00@24.0
Back	59.00@60.0

BEEF PRODUCTS

Tongues, No. 1	32 1/2¢
Brains	6 1/2¢ @ 7
Hearts	15
Livers, selected	48 @ 50
Livers, regular	42 @ 44
Tripe, scalded	5 1/2¢ @ 6
Tripe, cooked	7 @ 7 1/2
Lips, scalded	6 1/2¢ @ 8 1/2
Lips, unscalded	6 @ 6 1/2
Lungs	6¢
Melts	6 1/2¢ @ 7 1/2
Udders	5 @ 5 1/2

BEEF HAM SETS

Knuckles	50
Insides	48
Outsides	50

FANCY MEATS

(L.c.l. prices)	
Beef tongues, corned	36.00@37.00
Veal breads, under 12 oz.	72
12 oz. up	82@85
Calf tongues	23
Lamb fries	70@74
Ox tails, under 3/4 lb.	26.00@27.00
Over 3/4 lb.	26.00@27.00

WHOLESALE SMOKED MEATS

(L.c.l. prices)	
Hams, skinned, 14/16 lbs., wrapped	54 @ 59
Hams, skinned, 14/16 lbs., ready-to-eat, wrapped	56 @ 62
Hams, skinned, 16/18 lbs., wrapped	54 @ 57
Hams, skinned, 16/18 lbs., ready-to-eat, wrapped	56 @ 63
Bacon, fancy trimmed, brisket off, 8/10 lbs., wrapped	45 @ 47
Bacon, fancy square cut, seedless, 12/14 lbs., wrapped	42 @ 44
Bacon, No. 1 sliced, 1-lb. open-faced layers	52 @ 55 1/2

VEAL—SKIN OFF

Carcass	
(L.c.l. prices)	
Prime, 80/110	\$53.00@56.00
Prime, 110/150	53.00@55.00
Choice, 80/110	50.00@53.00
Choice, 110/150	45.00@50.00
Good, 80/80	40.00@43.00
Good, 80/110	43.00@49.00
Good, 110/150	40.00@45.00
Commercial, all wts.	30.00@40.00

CARCASS LAMBS

(L.c.l. prices)	
Prime, 30/50	\$53.00@56.00
Choice, 30/50	53.00@55.00
Good, all weights	47.00@50.00

(*Ceiling base prices, f.o.b. Chicago)

CARCASS MUTTON

(L.c.l. prices)	
Choice, 70/down	\$18.00@20.00
Good, 70/down	18.00@20.00
Utility, 70/down	17.00@19.00

FRESH PORK AND PORK PRODUCTS

(L.c.l. prices)	
Hams, skinned, 10/14	46 @ 40 1/2
Hams, skinned, 14/16	47 1/2 @ 47 1/2
Pork loins, regular	
12/down, 100 s	49
Pork loins, boneless, 100 s	65
Shoulders, skinned, bone-in, under 16 lbs., 100's	94
Picnics, 4/6 lbs., loose	28 1/2
Picnics, 6/8 lbs., loose	28
Boston butts, 4/8 lbs., 100's	37 @ 38
Tenderloins, fresh, 10's	91.40
Neck bones, bbls.	9
Livers, bbls.	18 1/2 @ 19
Brains, 10's	15.00@15.80
Ears, 30's	7 1/2 @ 8
Snouts, lean-in, 100's	11 @ 11
Feet, S. C., 30's	7

SAUSAGE MATERIALS—FRESH

Pork trim., reg. 40% bbls.	23.30*
Pork trim., guar. 50% lean, bbls.	24.80*
Pork trim., 95% lean, bbls.	52.80*
Pork cheek meat, trmd., bbls.	35 @ 36
Bull meat, bon's, bbls.	42 1/2
C.C. cow meat, bbls.	38
Beef trimmings, bbls.	33
Bon's chucks, bbls.	37 @ 38
Beef head meat, bbls.	24
Beef cheek meat, trmd., bbls.	25
Shank meat, bbls.	39 @ 39 1/2
Veal trim., bon's, bbls.	34 @ 36

*Packers ceiling, f.o.b. Chicago.

SAUSAGE CASINGS

(L.c.l. prices quoted to manufacturers of sausage.)

Beef casings:	
Domestic rounds, 1 1/2 in.	65 @ 75
Domestic rounds, over 1 1/2 in., 140 pack	95 @ 1.00
Export rounds, wide, over 1 1/2 in.	1.40 @ 1.00
Export rounds, medium, 1 1/2 in.	90 @ 95
Export rounds, narrow, 1 1/2 in. under	1.10 @ 1.30
No. 1 weasands, 24 in. up	12 @ 14
No. 2 weasands, 22 in. up	7 @ 9
No. 1 weasands, 2 in.	8
Middles, sewing, 1 1/2 in.	1.10 @ 1.25
Middles, select, wide, 2 @ 2 1/2 in.	1.55 @ 1.00
Middles, select, extra, 2 1/2 @ 2 1/2 in.	1.95 @ 2.00
Middles, select, extra, 2 1/2 in. & up	2.50 @ 2.60
Beef bungs, export, No. 1	22 @ 25
Beef bungs, domestic	20
Dried or salted bladders, per piece:	
12-15 in. wide, flat	15 @ 17
10-12 in. wide, flat	9 @ 10
8-10 in. wide, flat	5 @ 7

Pork casings:	
Extra narrow, 29 mm. & dn.	3.85 @ 4.00
Narrow, mediums, 29 @ 32 mm.	3.60 @ 3.80
Medium, 32 @ 35 mm.	2.15 @ 2.25
Spec. med., 35 @ 38 mm.	1.80 @ 1.90
Export bungs, 34 in. cut	26 @ 28
Large prime bungs, 34 in. cut	16 @ 19
Medium prime bungs, 34 in. cut	11 @ 14
Small prime bungs	7 1/2 @ 8
Middles, per set, cap. off	50 @ 55

DRY SAUSAGE

(L.c.l. prices)	
Cervelat, ch. hog bungs	1.01 @ 1.00
Thuringer	50.00 @ 58.0
Farmer	82 @ 84
Holsteiner	81 @ 84
R. C. Salsami, ch.	88 @ 93
Genoa style salami, ch.	94 @ 99
Peperoni	81 @ 86
Italian style hams	78 @ 83

DOMESTIC SAUSAGE

(L.C.L. prices)

Pork sausage, hog casings...	45	@46
Pork sausage, sheep cas...	53	@57
Frankfurters, sheep cas...	55	@63.7
Frankfurters, skinless...	48	@51
Bologna, artificial cas...	44	@46
Bologna, hog bungs...	43	@49 1/2
Smoked liver, hog bungs...	75	@76 1/2
New Eng. lunch, spec...	48	@51
Tongue and blood...	36	@38
Souse...	52	@58
Polish sausage, fresh...	52	@58
Polish sausage, smoked...	54	

SPICES

(Basis Chgo., orig. bbls., bags, bales)

	Whole	Ground
Allspice, prime	35	39
Resifted		41
Chili Powder		45
Chili Pepper		44
Cloves, Zanzibar	1.69	1.77
Ginger, Jam, unbl...	29	32
Ginger, African	24	29
Mace, fancy, Banda		48
East Indies		1.41
West Indies		1.31
Mustard, flour, fancy		35
No. 1		30
West India Nutmeg		54
Paprika, Spanish		52
Pepper, Cayenne		59
Red, No. 1		2.40
Pepper, Packers	1.97	1.94
Pepper, white	1.86	1.94
Malabar	1.97	2.04
Black Lampung	1.97	2.04

PACIFIC COAST WHOLESALE MEAT PRICES

	Los Angeles Oct. 15	San Francisco Oct. 14	No. Portland Oct. 15
FRESH BEEF (Carcass):			
STEER:			
Choice:			
500-600 lbs.	\$50.00@51.00	\$53.00@54.00	\$56.00@57.00
600-700 lbs.	49.00@50.00	51.00@53.00	55.00@57.00
Good:			
500-600 lbs.	44.00@46.00	51.00@52.00	50.00@55.00
600-700 lbs.	43.00@44.00	48.00@51.00	49.00@55.00
Commercial:			
350-600 lbs.	41.00@43.00	46.00@48.00	49.00@55.00
COW:			
Commercial, all wts.	32.00@34.00	38.00@44.00	34.00@40.00
Utility, all wts.	30.00@42.00	30.00@36.00	31.00@35.00
FRESH CALF:	(Skin-Off)	(Skin-Off)	(Skin-Off)
Choice:			
200 lbs. down	47.00@49.00	48.00@50.00	48.00@50.00
Good:			
200 lbs. down	45.00@47.00	46.00@48.00	46.00@49.00
FRESH LAMB (Carcass):			
Prime:			
40-50 lbs.	51.00@53.00	51.00@52.00	48.00@50.00
50-60 lbs.	49.00@51.00	50.00@52.00	48.00@50.00
Choice:			
40-50 lbs.	51.00@53.00	51.00@52.00	48.00@50.00
50-60 lbs.	49.00@51.00	49.00@52.00	46.00@49.00
Good, all wts.	48.00@50.00	48.00@50.00	46.00@49.00
MUTTON (EWE):			
Choice, 70 lbs. down	20.00@23.00	18.00@22.00	18.00@22.00
Good, 70 lbs. down	20.00@23.00	15.00@18.00	18.00@22.00
FRESH PORK CARCASSES (Packer Style)		(Shipper Style)	(Shipper Style)
80-120 lbs.	33.25@35.00	39.75@40.35	31.50@33.00
120-160 lbs.		38.65@39.15	
FRESH PORK CUTS No. 1:			
LOINS:			
8-10 lbs.	55.00@57.00	58.00@60.00	57.00@62.00
10-12 lbs.	55.00@57.00	58.00@60.00	57.00@62.00
12-16 lbs.	55.00@57.00	54.00@56.00	56.00@60.00
PICNICS:			
4-8 lbs.	37.00@41.00	36.00@38.00	38.00@42.00
PORK CUTS No. 1:	(Smoked)	(Smoked)	(Smoked)
HAM, Skinned:			
10-14 lbs.	56.00@61.00		
14-18 lbs.	56.00@62.00	58.00@62.00	56.00@61.00
BACON, "Dry Cure" No. 1:			
6-8 lbs.	46.00@54.00	52.00@56.50	52.00@55.00
8-10 lbs.	43.00@53.00	50.00@54.50	51.00@54.00
10-12 lbs.	43.00@53.00		48.00@53.00
LARD, Refined:			
1-lb. cartons	15.75@17.00	16.00@17.00	15.00@17.00
5-lb. cartons and cans	13.50@16.50	15.00@16.00	
Tierces	13.00@16.00	14.00@15.00	12.00@15.00

SEEDS AND HERBS

(L.C.L. prices)

	Whole	Ground for Saus.
Caraway seed	15	21
Cominos seed	23	30
Mustard seed, fancy	23	
Yellow American	20	
Oregano	21	26
Coriander, Morocco		
Natural, No. 1	13	16
Marjoram, French	34	45
Sage, Dalmatian		
No. 1	60	70

CURING MATERIALS

	Cwt.
Nitrate of soda, in 400-lb. bbls., del., or f.o.b. Chgo.	\$ 9.39
Saltpeter, N. ton, f.o.b. N.Y.	11.25
Dbl. refined gran.	14.00
Small crystals	15.40
Medium crystals	5.25
Pure rfd., gran. nitrate of soda	6.25
Pure rfd., powdered nitrate of soda	22.00
Salt, in min. car. of 60,000 lbs. only, paper sacked, f.o.b. Chgo.	Per ton
Granulated	\$22.00
Rock, per ton in 100-lb. bags, f.o.b. warehouse, Chgo.	25.50
Sugar—	
Raw, 98 basis, f.o.b. N.Y.	6.60
Refined standard cane gran.	
basis	8.65
Refined standard beet gran.	
basis	8.45
Packers, curing sugar, 100-lb. bags, f.o.b. Reserve, La., less 2%	8.35@8.45
Cerelose dextrose, per cwt.	7.92
L.C.L. ex-warehouse, Chgo.	7.92
C/L Del. Chgo.	7.82

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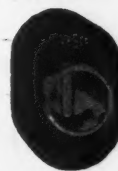
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(TRADEMARK)

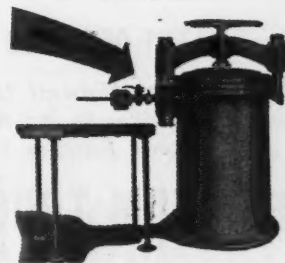
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PEORIA, ILLINOIS

CHICAGO PROVISION MARKETS

From The National Provisioner Daily Market Service

CASH PRICES

F.O.B. CHICAGO CHICAGO BASIS		PICNICS	
WEDNESDAY, OCT. 15, 1952		Fresh or F.F.A.	
REGULAR HAMS		Frozen	
Fresh or F.F.A.		Green	
8-10	43 1/2 n	43 1/2 n	28 n
10-12	43 1/2 n	43 1/2 n	28 n
12-14	44 n	44 n	28 n
14-16	44 1/4 n	44 n	28
BOILING HAMS		BELLIES	
Fresh or F.F.A.		Cured	
16-18	45 1/2 n	45 1/2 n	29 1/4 n
18-20	44 1/2 n	44 1/2 n	29 1/4 n
20-22	41 n	41 n	29 1/4 n
SKINNED HAMS		GR. AMN. BELLIES	
Fresh or F.F.A.		D. S. BELLIES	
10-12	46	46 n	30 n
12-14	46 1/2	46 n	30 1/2 n
14-16	46 1/2 @ 47	46 1/2	30 1/2 n
16-18	47 @ 48	47 @ 48	30 1/2 n
18-20	47	47	30 1/2 n
20-22	43 1/2	43 1/2	30 1/2 n
22-24	43 1/2	43 1/2	30 1/2 n
24-26	43 1/2	43 1/2	30 1/2 n
26-28	43 1/2	43 1/2	30 1/2 n
28-30	40 n	40 n	30 1/2 n
30-32	40 n	40 n	30 1/2 n
32-34	40 n	40 n	30 1/2 n
34-36	40 n	40 n	30 1/2 n
36-38	40 n	40 n	30 1/2 n
38-40	40 n	40 n	30 1/2 n
40-42	40 n	40 n	30 1/2 n
42-44	40 n	40 n	30 1/2 n
44-46	40 n	40 n	30 1/2 n
46-48	40 n	40 n	30 1/2 n
48-50	40 n	40 n	30 1/2 n
50-52	40 n	40 n	30 1/2 n
52-54	40 n	40 n	30 1/2 n
54-56	40 n	40 n	30 1/2 n
56-58	40 n	40 n	30 1/2 n
58-60	40 n	40 n	30 1/2 n
60-62	40 n	40 n	30 1/2 n
62-64	40 n	40 n	30 1/2 n
64-66	40 n	40 n	30 1/2 n
66-68	40 n	40 n	30 1/2 n
68-70	40 n	40 n	30 1/2 n
70-72	40 n	40 n	30 1/2 n
72-74	40 n	40 n	30 1/2 n
74-76	40 n	40 n	30 1/2 n
76-78	40 n	40 n	30 1/2 n
78-80	40 n	40 n	30 1/2 n
80-82	40 n	40 n	30 1/2 n
82-84	40 n	40 n	30 1/2 n
84-86	40 n	40 n	30 1/2 n
86-88	40 n	40 n	30 1/2 n
88-90	40 n	40 n	30 1/2 n
90-92	40 n	40 n	30 1/2 n
92-94	40 n	40 n	30 1/2 n
94-96	40 n	40 n	30 1/2 n
96-98	40 n	40 n	30 1/2 n
98-100	40 n	40 n	30 1/2 n
100-102	40 n	40 n	30 1/2 n
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128-130	40 n	40 n	30 1/2 n
130-132	40 n	40 n	30 1/2 n
132-134	40 n	40 n	30 1/2 n
134-136	40 n	40 n	30 1/2 n
136-138	40 n	40 n	30 1/2 n
138-140	40 n	40 n	30 1/2 n
140-142	40 n	40 n	30 1/2 n
142-144	40 n	40 n	30 1/2 n
144-146	40 n	40 n	30 1/2 n
146-148	40 n	40 n	30 1/2 n
148-150	40 n	40 n	30 1/2 n
150-152	40 n	40 n	30 1/2 n
152-154	40 n	40 n	30 1/2 n
154-156	40 n	40 n	30 1/2 n
156-158	40 n	40 n	30 1/2 n
158-160	40 n	40 n	30 1/2 n
160-162	40 n	40 n	30 1/2 n
162-164	40 n	40 n	30 1/2 n
164-166	40 n	40 n	30 1/2 n
166-168	40 n	40 n	30 1/2 n
168-170	40 n	40 n	30 1/2 n
170-172	40 n	40 n	30 1/2 n
172-174	40 n	40 n	30 1/2 n
174-176	40 n	40 n	30 1/2 n
176-178	40 n	40 n	30 1/2 n
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180-182	40 n	40 n	30 1/2 n
182-184	40 n	40 n	30 1/2 n
184-186	40 n	40 n	30 1/2 n
186-188	40 n	40 n	30 1/2 n
188-190	40 n	40 n	30 1/2 n
190-192	40 n	40 n	30 1/2 n
192-194	40 n	40 n	30 1/2 n
194-196	40 n	40 n	30 1/2 n
196-198	40 n	40 n	30 1/2 n
198-200	40 n	40 n	30 1/2 n
200-202	40 n	40 n	30 1/2 n
202-204	40 n	40 n	30 1/2 n
204-206	40 n	40 n	30 1/2 n
206-208	40 n	40 n	30 1/2 n
208-210	40 n	40 n	30 1/2 n
210-212	40 n	40 n	30 1/2 n
212-214	40 n	40 n	30 1/2 n
214-216	40 n	40 n	30 1/2 n
216-218	40 n	40 n	30 1/2 n
218-220	40 n	40 n	30 1/2 n
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266-268	40 n	40 n	30 1/2 n
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278-280	40 n	40 n	30 1/2 n
280-282	40 n	40 n	30 1/2 n
282-284	40 n	40 n	30 1/2 n
284-286	40 n	40 n	30 1/2 n
286-288	40 n	40 n	30 1/2 n
288-290	40 n	40 n	30 1/2 n
290-292	40 n	40 n	30 1/2 n
292-294	40 n	40 n	30 1/2 n
294-296	40 n	40 n	30 1/2 n
296-298	40 n	40 n	30 1/2 n
298-300	40 n	40 n	30 1/2 n
300-302	40 n	40 n	30 1/2 n
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304-306	40 n	40 n	30 1/2 n
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308-310	40 n	40 n	30 1/2 n
310-312	40 n	40 n	30 1/2 n
312-314	40 n	40 n	30 1/2 n
314-316	40 n	40 n	30 1/2 n
316-318	40 n	40 n	30 1/2 n
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320-322	40 n	40 n	30 1/2 n
322-324	40 n	40 n	30 1/2 n
324-326	40 n	40 n	30 1/2 n
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328-330	40 n	40 n	30 1/2 n
330-332	40 n	40 n	30 1/2 n
332-334	40 n	40 n	30 1/2 n
334-336	40 n	40 n	30 1/2 n
336-338	40 n	40 n	30 1/2 n
338-340	40 n	40 n	30 1/2 n
340-342	40 n	40 n	30 1/2 n
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350-352	40 n	40 n	30 1/2 n
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362-364	40 n	40 n	30 1/2 n
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378-380	40 n	40 n	30 1/2 n
380-382	40 n	40 n	30 1/2 n
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386-388	40 n	40 n	30 1/2 n
388-390	40 n	40 n	30 1/2 n
390-392	40 n	40 n	30 1/2 n
392-394	40 n	40 n	30 1/2 n
394-396	40 n	40 n	30 1/2 n
396-398	40 n	40 n	30 1/2 n
398-400	40 n	40 n	30 1/2 n
400-402	40 n	40 n	30 1/2 n
402-404	40 n	40 n	30 1/2 n
404-406	40 n	40 n	30 1/2 n
406-408	40 n	40 n	30 1/2 n
408-410	40 n	40 n	30 1/2 n
410-412	40 n	40 n	30 1/2 n
412-414	40 n	40 n	30 1/2 n
414-416	40 n	40 n	30 1/2 n
416-418	40 n	40 n	30 1/2 n
418-420	40 n	40 n	30 1/2 n
420-422	40 n	40 n	30 1/2 n
422-424	40 n	40 n	30 1/2 n
424-426	40 n	40 n	30 1/2 n
426-428	40 n	40 n	30 1/2 n
428-430	40 n	40 n	30 1/2 n
430-432	40 n	40 n	30 1/2 n
432-434	40 n	40 n	30 1/2 n
434-436	40 n	40 n	30 1/2 n
436-438	40 n	40 n	30 1/2 n
438-440	40 n	40 n	30 1/2 n
440-442	40 n	40 n	30 1/2 n
442-444	40 n	40 n	30 1/2 n
444-446	40 n	40 n	30 1/2 n
446-448	40 n	40 n	30 1/2 n
448-450	40 n	40 n	30 1/2 n
450-452	40 n	40 n	30 1/2 n
452-454	40 n	40 n	30 1/2 n
454-456	40 n	40 n	30 1/2 n
456-458	40 n	40 n	30 1/2 n
458-460	40 n	40 n	30 1/2 n
460-462	40 n	40 n	3

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- YOUR CHOICE OF 6 STYLES

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"FAMCO" AUTOMATIC SAUSAGE LINKER

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16,000 LINKS PER HOUR WITH "FAMCO"!

The "FAMCO" automatic sausage linker links 1400 lbs. of sausage per hour . . . and every hour! Easy to handle, operate and maintain. Many built-in economies. Write for details!

CAPACITY 3" to 7" LINKS

3 to 7-inch lengths, increments of 1/4" . . . any dia. from 5/8" to 1 1/4" in natural casings.

3 1/2" length—18,000 links per hour
4 " length—15,360 links per hour
5 " length—12,480 links per hour
6 " length—10,560 links per hour

ALLEN GAUGE & TOOL CO.

FAMCO DIVISION

421 N. BRADDOCK AVENUE, PITTSBURGH 21, PENNSYLVANIA

MARKET PRICES NEW YORK

WHOLESALE FRESH MEATS CARCASS BEEF (Ceiling base prices)

	Oct. 15, 1952
	Per lb.
	Western
Prime, 800 lbs./down . . .	\$55.50@57.50
Choice, 800 lbs./down . . .	54.50@56.50
Good	48.00@52.00
Steer, commercial	38.00@45.00
Cow, commercial	34.00@37.00
Cow, utility	30.00@33.00

BEEF CUTS†

	City
Prime:	
Hindquarter	60.00@ 68.0
Forequarter	47.00@ 56.0
Round	61.00@ 63.0
Trimmed full loin	85.00@ 90.0
Flank	15.00@ 19.0
Short loin, trimmed . . .	105.00@110.0
Sirloin, butt bone in . . .	67.00@ 72.0
Arm chuck (Kosher) . . .	56.00@ 58.0
Forequarter (Kosher) . .	52.00@ 54.0
Brisket (Kosher)	40.00@ 43.0
Regular chuck	54.00@ 58.0
Foreshank	30.00@ 32.0
Brisket	38.00@ 42.0
Rib	38.00@ 40.0
Short plate	19.00@ 20.0
Arm chuck	53.00@ 56.0
Arm chuck (Kosher) . . .	56.00@ 58.0

	City
Choice:	
Hindquarter	60.00@ 65.0
Forequarter	47.00@ 50.0
Round	61.00@ 63.0
Trimmed full loin	80.00@ 82.0
Flank	15.00@ 19.0
Short loin, trimmed . . .	100.00@105.0
Forequarter (Kosher) . .	50.00@ 53.0
Arm chuck (Kosher) . . .	56.00@ 58.0
Brisket (Kosher)	40.00@ 43.0
Regular chuck	54.00@ 58.0
Foreshank	30.00@ 32.0
Brisket	38.00@ 42.0
Rib	38.00@ 40.0
Short plate	19.00@ 20.0
Arm chuck	53.00@ 56.0
Arm chuck (Kosher) . . .	56.00@ 58.0

FANCY MEATS

	(l.c.l. prices)
Veal breads, under 6 oz. . .	102.50
6 to 12 oz.	102.50
12 oz. up	102.50
Beef kidneys	16.8*
Beef livers, selected	62.8*
Beef livers, selected, kosher .	62.8*
Oxtails, over 3/4 lb.	27.8*

*Ceiling base prices.

LAMBS

	(l.c.l. prices)	City
Prime lambs, 50/down . .	\$59.00@62.00	
Prime, 50/60	58.00@61.00	
Choice lambs, 50/down . .	58.00@62.00	
Good, all wts.	54.00@58.00	
	Western	
Prime, 50/down	\$57.00@60.00	
Prime, 50/60	56.00@58.00	
Choice, all wts.	55.00@58.00	
Good, all wts.	52.00@56.00	

For permissible additions to ceiling base prices, see CPR 24.

FRESH PORK CUTS

	(l.c.l. prices)	Western
Hams, sknd., 14/down . .	\$52.00@54.00	
Bellies, sq. cut, seedless, 8/12 lbs.	38.00	
Picnics, 4/8 lbs.	44.00@52.00	
Pork loins, 12/down . . .	56.00@58.00	
Boston butts, 4/8 lbs. . .	41.00@43.00	
Spareribs, 3/down	47.00@49.00	
Pork trim., regular	26.00	
Pork trim., spec. 80% . . .	46.00	
	City	
Hams, sknd., 14/down . .	\$50.00@54.00	
Pork loins, 12/down . . .	58.00@61.00	
Boston butts, 4/8 lbs. . .	43.00@49.00	
Spareribs, 3/down	50.00@53.00	

VEAL—SKIN OFF

	(l.c.l. prices)	Western
Prime, carcass, 80/110 . .	\$56.00@60.00	
Prime, 110/150	54.00@60.00	
Choice, 80/110	54.00@60.00	
Choice, 110/150	46.00@54.00	
Good, carcass, 80/down .	46.00@52.00	
Good, 80/110	48.00@54.00	
Commercial carcass	38.00@44.00	

DRESSED HOGS

	(l.c.l. prices)
Hogs, gd. & ch., hd. on, lf. fat in	
100 to 136 lbs.	\$33.50@37.50
137 to 153 lbs.	33.50@37.50
154 to 171 lbs.	33.50@37.50
172 to 188 lbs.	33.50@37.50

BUTCHERS' FAT

	(l.c.l. prices)
Shop fat	\$0.75
Breast fat	1.25
Inedible suet	1.25
Edible suet	1.25

LIVESTOCK PRICES AT SIOUX CITY

Prices paid for livestock at Sioux City on Wednesday, Oct. 15, were reported as follows:

CATTLE:

Steers, choice & pr. . . .	\$34.00@35.00
Steers, good & ch.	30.00@33.50
Steers, com. & good . . .	24.00@28.50
Heifers, ch. & pr.	33.00 only
Heifers, gd. & ch.	32.50 only
Cows, util. & com'l. . . .	13.00@16.50
Cows, can., cut.	10.50@12.50
Bulls, good	None rec.
Bulls, util. & com.	17.00@20.00
Bulls, can., cut.	12.00@15.00

HOGS:

Good 180/190	\$18.25@18.75
Good, ch., 200/250	18.75@19.00
Gd., ch., 260/300	18.50@18.75
Sows, 400/down	17.25@18.00

SHEEP (Lambs):

Choice & prime	None rec.
Good to choice	\$22.50@24.50

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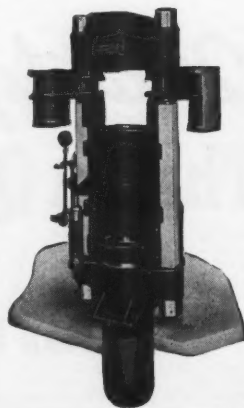
MORE GREASE
Purer GREASE
LESS REWORKING
GREATER CLEANLINESS

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The French Oil Mill
Machinery Company

Piqua

Ohio



BY-PRODUCTS....FATS AND OILS

TALLOWES AND GREASES

Wednesday, October 15, 1952

Moderate action was reported in the tallow and grease market late last week, with the "hot" item being special tallow, which sold steady to fractionally higher. A few tanks of special tallow sold at 4½c, c.a.f. Chicago, steady. Several more tanks of same moved at 5¼c, delivered East. Few tanks of bleachable fancy tallow sold at 5¼c, c.a.f. Chicago. Several more tanks of bleachable fancy tallow sold at 5¼c, delivered East. A tank of B-white grease sold at 4¼c, Chicago basis. Few tanks of prime tallow traded at 4¼c, c.a.f. Chicago.

Several tanks of yellow grease sold at 3¼c, delivered Chicago. A tank each of bleachable fancy tallow, prime tallow and yellow grease moved at 5¼c, 4¼c, and 3¼c, respectively, all c.a.f. Chicago. Bids of 5c, Chicago, were in the market for bleachable fancy tallow, with offerings held at 5¼c. Special tallow held at 4¼c, Chicago.

On Monday of the new week, the market was exceptionally quiet, and of a semi-holiday character (Columbus Day). Choice white grease was reported offered out at 5½c, Chicago, and without action. The only sale reported was a tank of yellow grease at 3¼c, delivered Chicago.

New mark-downs were made in a few tallow and grease items. A few tanks of choice white grease sold at 5¼c, and several more tanks of same at 5¼c, all c.a.f. Chicago, or ½¢ @ ¼c down. B-white grease traded at 4¼c and 4¼c, and yellow grease at 3¼c; volume was fair. Bleachable fancy tallow sold at 5¼c, c.a.f. Chicago, and 5½c delivered East, several tanks involved. Few tanks of prime tallow sold steady at 4¼c, delivered Chicago.

At midweek, moderate action was recorded, and in a few instances prices again receded fractionally. Prime tallow sold steady at 4¼c, yellow grease steady at 3¼c, and special tallow at

BY-PRODUCTS MARKETS

(Chicago, Wednesday, Oct. 15)

Blood

Unground, per unit of ammonia (bulk)	Unit Ammonia
.....	*8.25

Digester Feed Tankage Materials

Wet rendered, unground, loose,	*0.25
Low test	*8.50
High test	3.50
Liquid stick tank cars	

Packinghouse Feeds

	Carlots, per ton
50% meat and bone scraps, bagged	115.00
50% meat and bone scraps, bulk.....	110.00
55% meat scraps, bulk	120.00
60% digester tankage, bulk	110.00
60% digester tankage, bagged	115.00
80% blood meal, bagged	140.00
70% standard steamed bone meal, bagged	95.00

Fertilizer Materials

High grade tankage, ground, per unit ammonia	*6.25
Hoof meal, per unit ammonia	7.00

Dry Rendered Tankage

	Per unit Protein
Low test	*2.00@2.05
High test	*1.90

Gelatine and Glue Stocks

	Per cwt.
Calf trimmings (limed)	\$ 1.75@ 2.00
Hide trimmings (green, salted)	20.00@25.00
Cattle jaws, skulls and knuckles, per ton	65.00
Pig skin scraps and trimmings, per lb.	5½

Animal Hair

Winter coil dried, per ton	*45.00@50.00
Summer coil dried, per ton	*37.50
Cattle switches, per piece	5¼
Winter processed, gray, lb.	9 @10
Summer processed, gray, lb.	3 @ 3½

n—nominal. a—asked.
*Quoted delivered basis.

4½c, or ½c down, all c.a.f. Chicago. Several tanks of each were involved. Original fancy tallow was bid at 5¼c, East, but no action reported. Several tanks of No. 2 tallow sold at 3¼c, Chicago basis. Couple tanks of No. 1 tallow sold at 4½c, delivered East. Few tanks of yellow grease sold at 4¼c, also c.a.f. East.

TALLOWES: Wednesday's quotations:

VEGETABLE OILS

Wednesday, October 15, 1952

The last half of the preceding week was marked with little activity and limited movement of some selections at fractional advances.

Thursday, soybean oil traded early at 10½c for October through December shipments. Later bids at that level failed to bring out material. January through March was bid at 10½c, without action. No movement of cottonseed oil was reported. Valley and Southeast was called 13¼c to 13½c, nominally, and Texas quoted 13¼c, bid at favorable spots with 13½c asked. Buying interest was lacking in corn oil with offerings at 14¼c. Peanut oil was offered at 17½c and coconut oil movement at 12c for nearby.

On Friday, October soybean oil traded at 10½c, with some trading through March at the same levels with later interest at 10½c.

Trading remained light throughout. Cottonseed oil moved in the Valley at 13½c and the market in the Southeast was pegged at an equal price, nominally. Texas cottonseed oil traded at favorable points at 13½c and sold in south Texas at 13¼c and 13½c. Corn oil was called 14½c to 14¾c, nominal basis. Peanut oil was bid at 17½c and coconut oil cashed ¼c higher at 12¼c for nearby.

With the commodity exchanges closed on Monday in observance of the Columbus Day Holiday, the spot oil market was dull. A few unconfirmed trades in

Original fancy tallow, 5¼@5½c; bleachable fancy tallow, 5@5½c; prime tallow, 5½c; special tallow, 4½c; No. 1 tallow, 3¾c, and No. 2 tallow, 3¼c.

GREASES: Wednesday's quotations: Choice white grease, 5¼c; A-white grease, 4¼c; B-white grease, 4¼@4½c; yellow grease, 3¼c; house grease, 3½c, and brown grease, 2½@2¾c.



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110 N. FRANKLIN STREET

CHICAGO, ILLINOIS

October soybean oil were reported at 10½c, with this figure bid for immediate, and with November-December available at same price. Other edible oils were quiet.

Action was slow Tuesday. October soybean oil traded early at 10½c with later bids at 10¾c. Sellers held firmly for 10½c and no further action was reported. Corn oil reported was bid at 10½c, with 10¾c asked and indicated 10½c would buy a few tanks. On peanut oil, 17½c continued to be bid and asking prices were lowered ¼c on coconut. Valley and Southeast cotton oil was quiet and called steady, nominally, with central Texas oil bid in a limited

VEGETABLE OILS

Wednesday, Oct. 15, 1952

Crude cottonseed oil, carlots, f.o.b. mills	
Valley	13¾ pd
Southeast	13¾ n
Texas	13¾ @ 13¾ n
Corn oil in tanks, f.o.b. mills	14½ ax
Peanut oil, f.o.b. Southern mills	18pd
Soybean oil, Decatur	10½ pd
Coconut oil, f.o.b. Pacific Coast	12½ x
Cottonseed foots.	
Midwest and West Coast	1½ n
East	1½ n

a—asked. n—nominal. pd—paid.

OLEOMARGARINE

Wednesday, Oct. 15, 1952

White domestic vegetable	28
White animal fat	28
Milk churned pastry	25
Water churned pastry	24

OLEO OILS

(FOB Chicago)

Prime oleo stearine (slack barrels)	lb. 8c
Extra oleo oil (drums)	13½ @ 14½ cn

way at 13¾c and south Texas reported available at this level without trade.

On Wednesday a tank or two of soybean oil sold at 10¾c. Corn oil was offered at 14½c, without reported trade. Cottonseed oil sold in the Valley at 13¾c and Texas was called 13¾ @ 13¾c, nominal. Peanut oil cashed at 18c and coconut oil again was tagged ¼c lower without action.

Cottonseed oil prices in New York were quoted as follows:

FRIDAY, OCT. 10, 1952

	Open	High	Low	Close	Prev. Close
May	16.26b			16.31	16.28
July	16.29b			16.36	16.32
Sept.	15.60b			15.61	15.60b
Oct.	15.98			15.94	15.88b
Dec.	16.03			16.07	16.02
Jan.	15.95b			16.00b	15.95b
Mar.	16.21b			16.20	16.21
Oct., '53	15.50b			15.94b	15.50b

Sales: 152 lots.

MONDAY, OCT. 13, 1952

(COLUMBUS DAY)

No Trading

TUESDAY, OCT. 14, 1952

Jan.	15.95b			15.90b	16.00b
Mar.	16.25	16.26	16.15	16.15	16.26
May	16.29b	16.30	16.20	16.20	16.31
July	16.34b	16.33	16.22	16.22b	16.36
Oct.	15.90b	16.00	15.89	15.96	15.94
Dec.	16.05b	16.05	16.00	16.02	16.07
Sept.	15.60b	15.52	15.46	15.40b	15.61
Oct.	15.50b	15.50	15.50	15.30b	....

Sales: 203 lots.

WEDNESDAY, OCT. 15, 1952

Jan.	15.90b			15.80b	15.90b
Mar.	16.16	16.25	16.05	16.05	16.15
May	16.17b	16.29	16.06	16.08	16.20
July	16.18b	16.30	16.20	16.08	16.22b
Oct.	15.92b	15.99	15.91	15.99	15.96
Dec.	16.02b	16.12	15.92	15.92	16.02
Sept.	15.36b			15.25b	15.40b
Oct.	15.20			15.20b	15.30b

Sales: 274 lots.

Cuba Buys Less Lard, Pork Fat in Second Quarter

Cuban imports of lard and rendered pork fat dropped sharply in the April-June quarter, as indicated by a report on foreign crops and markets. The amount, 33,235,000 lbs., was almost 23,000,000 lbs. less than the 56,120,000 lbs. for the previous quarter, but more than the 25,477,000 lbs. in the same period in 1951.

Imports of inedible tallow and grease declined to 5,400,000 lbs. from 6,200,000 lbs. in January through March. Production of lard on the island was small due to the fact that most hogs are put on the market as fresh meat. Slaughter is done mainly on farms.

Consumption of lard was estimated at 38,000,000 lbs. against 40,000,000 lbs. the first quarter.

AUG. SHORTENING, OILS

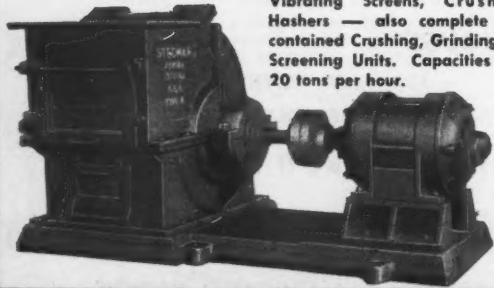
Shortening and edible oil shipments to private interests rose to 257,121,000 lbs. in August from 237,167,000 lbs. in July, the Institute of Shortening and Edible Oils has reported. Of the August amount, 107,417,000 lbs. or 41.8 per cent was shortening. Edible oil shipments amounted to 139,760,000 lbs., or 54.3 per cent of the month's total.

Shipments to agencies of the federal government and federal government controlled corporations and shipments for commercial export totaled 9,944,000 lbs. against 9,602,000 lbs. in July.

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for CRACKLINGS, BONES
DRIED BLOOD, TANKAGE
and other BY-PRODUCTS

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HIDES AND SKINS

Big packer market mostly steady; in few instances on fair movement, prices receded $\frac{1}{2}$ @1c—Small packer hides shaded fractionally—Calf and kipskins $\frac{1}{2}$ @c down—Sheepskins steady to higher.

CHICAGO

PACKER HIDES: On Friday last week, a fair to good trade was reported in the big packer hide market, with some selections selling off $\frac{1}{2}$ @1c. Around 10,000 to 12,000 heavy native steers sold at 16c, steady. Heavy native cow sales came to light, after a rather quiet spell in that category; 3,000 Rivers and St. Pauls brought 17c, and 2,000 Chicago Omahas sold at the same figure. These sales were 1c down on the St. Pauls and $\frac{1}{2}$ c off on the Rivers. Around 1,000 light native cows moved at 18c, steady.

On Monday of the new week, the market was more or less of a semi-holiday character. Most classes were talked steady, with the branded cows and steers maintaining a tinge of weakness. Bids on most selections on Tuesday were listed at $\frac{1}{2}$ c under last trading. However, some sources held for a steady price or fractionally higher. About 2,800 light cows and ex-light native steers sold at 24c, f.o.b. Fort Worth. Few light native cows traded at a steady price of 18c during the day.

At midweek movement in the small packer hide market was fair with the top side of the list shaded $\frac{1}{2}$ c. Big packer market was more or less active, and in some instances product moved fractionally under last trading; some selections brought fully steady prices. About 13,000 heavy native cows brought 16c, or 1c down. A total of 8,000 light native cows, Rivers, sold at 18c, steady. Another sale involved 30,000 branded cows at 15c, also $\frac{1}{2}$ c lower. Two cars heavy native steers sold at 16c, steady. It was reported that 1,400 Colorados sold at $12\frac{1}{2}$ c, or $\frac{1}{2}$ c down.

Another sale was the movement of 1,200 butt branded steers at $13\frac{1}{2}$ c, steady.

SMALL PACKER AND COUNTRY HIDES: Not much action in this category, with trade talk mostly at steady levels. Car of good light average small packer hides, selected, sold at 16c, Midwest. Fair selling action took place in the small hide market, with the top side of the list shaded fractionally in some instances.

CALFSKINS AND KIPSKINS: Some kipskin movement at $\frac{1}{2}$ @c lower levels was reported late last week, with the volume only fair; 2,000 light native kips sold at $32\frac{1}{2}$ c, and 2,900 over-weights, two separate sales, at 28c. On Tuesday, continued light movement of light kips

was reported, and again at the $32\frac{1}{2}$ c level, volume undisclosed.

SHEEPSKINS: A reversal from last week's weakness registered in the shearing and fall clip market, and movement of same was reported as good. Four cars of shearlings and fall clips sold, at 2.25 on the former, No. 1s, and 2.50@2.75 on the latter. No. 2 shearlings and No. 3's quoted steady at 1.70 and 1.10, respectively. Last sales reported were at those levels. Dry wool pelts moved at a better price of 30c, or 2c higher. Pickled skins sold at 10.50@11.00, volume only fair. Horsehides displayed some weakness, and were quoted at 7.00@7.25 nominal. Big packer slunks were quoted at 2.05 on the regular and 75c on the hairless; small packer slunk trading took place at 1.75 on the regular and 50c on the hairless; volume of movement was considered light.

CHICAGO HIDE MOVEMENT

Receipts of hides at Chicago for the week ended October 11, 1952, were 5,786,000 lbs.; previous week, 5,569,000 lbs.; same week 1951, 3,408,000 lbs.; 1952 to date, 181,931,000 lbs.; same period 1951, 202,032,000 lbs.

Shipments for the week ended October 11, 1952, totaled 4,711,000 lbs.; previous week, 3,824,000 lbs.; corresponding week, 1951, 2,928,000 lbs.; this year to date, 159,470,000 lbs.; corresponding period, 1951, 155,474,000 lbs.

CHICAGO HIDE QUOTATIONS

	PACKER HIDES		
	Week ended Oct. 15	Previous Week	Cor. Week 1951
Nat. steers .16 @18n	16 @18	33 @35 $\frac{1}{2}$	
Hvy. Texas str.	13 $\frac{1}{2}$ n	13 $\frac{1}{2}$ n	29
Hvy. butt, brand'd str.	13 $\frac{1}{2}$	13 $\frac{1}{2}$ n	29 $\frac{1}{2}$
Hvy. Col. str.	12 $\frac{1}{2}$	13n	28
Ex. light Tex. str.	17 $\frac{1}{2}$ n	17 $\frac{1}{2}$ n	35
Brand'd cows.	15	15 $\frac{1}{2}$ n	31 $\frac{1}{2}$
Hr. nat. cows	16	17 $\frac{1}{2}$	34*
Lt. nat. cows	18	18	33 $\frac{1}{2}$ 34
Nat. bulls	9 $\frac{1}{2}$ @10n	9 $\frac{1}{2}$ @10n	24*
Brand'd bulls.	8 $\frac{1}{2}$ @9n	8 $\frac{1}{2}$ @9n	23*
Calfskins, Nor.			
10/15	50n	50n	50n
10/down	45n	45n	..
Kips, Nor.			
nat. 15/25	32 $\frac{1}{2}$	35n	43 $\frac{1}{2}$ n
Kips, Nor. branded	30n	30n	41

SMALL PACKER HIDES

STEERS AND COWS:

60 lbs. and over.	13 $\frac{1}{2}$ @14n	13 $\frac{1}{2}$ @14 $\frac{1}{2}$ n	....
50 lbs.	14 $\frac{1}{2}$ @15n	14 $\frac{1}{2}$ @15 $\frac{1}{2}$ n	....

SMALL PACKER SKINS

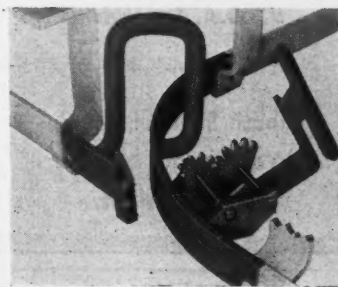
Calfskins, under			
15 lbs.	35n	30n	40@ 42
Kips, 15/30	26n	28n	34@ 36
Slunks, regular	1.75	2.05	1.25@1.50
Slunks, hairless	50	75n	60n

SHEEPSKINS

Pkr. shearlings.			
No. 1	2.25	2.25	3.35@3.50
Dry Pelts	30	28n	40@ 42
Horsehides, untrmd.	7.00@7.25n	7.25@7.50n	11.00

*Ceiling prices.

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Edges For Long Lasting Satisfaction

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ALLIED MANUFACTURING CO. DES MOINES IOWA

Wholesale Price Indexes

Lard at 14.0 per cent, led all food products in price declines during the week ended September 30, according to the Bureau of Labor Statistics. Meats also declined from 112.5 per cent to 108.7 per cent based on the 1947-49 average of 100 per cent. Cottonseed oil dipped 3.1 per cent.

CHICAGO PROV. SHIPMENTS

Provision shipments by rail, in the week ended Oct. 11, with comparisons:

	Week Oct. 11	Previous Week	Cor. Week 1951
Cured meats, pounds	5,284,000	11,076,000	6,957,000
Fresh meats, pounds	35,470,000	24,605,000	31,062,000
Lard, pounds	3,647,000	4,076,000	3,726,000

Central Livestock Order Buying Company

Trained buyers of:

✓ CATTLE

✓ HOGS

✓ CALVES

✓ SHEEP

✓ LAMBS

For Slaughterers and
Feeders,
U.S.D.A. Supervision

South St. Paul, Minn.
West Fargo, N. Dak.
Billings, Mont.

WEEK'S CLOSING MARKETS

THURSDAY'S CLOSINGS Provisions

The top price paid for live hogs at Chicago was \$19.25; average \$18.85. Provision prices were quoted as follows: Under 12 pork loins, 47@48; 10/14 green skinned hams, 46@46½; Boston butts, 37; 16/down pork shoulders, 33½@34; 3/down spareribs, 38½@39; 8/12 fat backs, 8@10; regular pork trimmings, 23n; 18/20 DS bellies, 26n; 4/6 green picnics, 28¼@28½; 8/up green picnics, 28¼@28½.

P.S. loose lard was quoted at 8.50 bid and P.S. lard in tierces at 9.00 asked.

COTTONSEED OIL

Closing cottonseed oil futures in New York were quoted as follows: Nov. 15.90 b-95 ax; Dec. 15.94-93; Jan. 15.85 b-16.00 ax; Mar. 16.07-06; May 16.09; July 16.11; Sept. 15.30 b; Oct. 15.20 b; Dec. 15.20 n; Sales: 297 lots.

N. Y. HIDE FUTURES

FRIDAY, OCT. 10, 1952

	Open	High	Low	Close
Jan.	15.24b	15.30	15.15	15.15
Jan., '54. 14.45b	.....	.....	14.35b	45a
Apr.	14.85	14.85	14.70	14.70
July	14.65b	.....	14.55b	65a
Oct.	16.11b	16.20	16.10	16.10
Oct., '53. 14.55b	14.65	14.55	14.45b	55a

Sales: 49 lots.

MONDAY, OCT. 13, 1952

(COLUMBUS DAY)
No Trading

TUESDAY, OCT. 14, 1952

	Open	High	Low	Close
Jan.	15.10	15.15	14.99	15.15
Apr.	14.45b	14.51	14.51	14.55b-65a
July	14.45-40	14.45	14.37	14.40b-55a
Oct.	14.25b	.....	14.25b	45a
Jan.	14.05b	.....	14.15b	35a
Apr.	14.05b	.....	14.05b	25a

Sales: 63 lots.

WEDNESDAY, OCT. 15, 1952

	Open	High	Low	Close
Jan.	15.14-10	15.14	14.70	14.70
Apr.	14.55b	14.58	14.30	14.20b-25a
July	14.40b	14.35	14.15	14.10b-15a
Oct.	14.25b	14.22	14.05	14.00b-05a
Jan.	14.30	.....	13.90b	95a
Apr.	14.05b	.....	13.80b	85a

Sales: 37 lots.

THURSDAY, OCT. 16, 1952

	Open	High	Low	Close
Jan.	14.65-63	14.80	14.55	14.70b-85a
Apr.	14.15b	14.30	14.23	14.20b-35a
July	14.05b	14.12	14.00	14.10b-25a
Oct.	14.00	14.00	14.00	13.98b-14.15a
Jan.	13.80b	.....	13.86b	14.05a
Apr.	13.70b	.....	13.75b	95a

Sales: 55 lots.

CHICAGO PROVISION STOCKS

A report on Chicago provision stocks as of October 15, showed lard inventories of 59,421,220 lbs., or nearly 10,000,000 lbs. less than two weeks earlier. On September 30, lard inventories in Chicago were 68,753,858 lbs., and on October 30, last year, lard inventories amounted to 8,729,903 lbs. Details of Chicago October 15 inventories follow:

	Oct. 15, '52, lbs.	Sept. 30, '52, lbs.	Oct. 15, '52, lbs.
P.S. lard (a) ...	2,382,201	.....	2,725,541
P.S. lard (b) ...	39,589,843	56,555,834	1,458,000
Dry rendered lard (a) .....	.....	.....	41,273
Dry rendered lard (b)	7,371,940	7,350,940	642,000
Other lard	10,077,236	4,847,284	3,863,098
TOTAL LARD	59,421,220	68,753,858	8,729,903
D.S. Cl. bellies (contract) ...	1,000	.....	171,400
D.S. Cl. bellies (other)	2,153,046	3,019,581	3,632,406
TOT. D.S. CL. BELLIES ...	2,154,046	3,019,581	3,803,806

(a) Made since Oct. 1, 1951. (b) Made previous to Oct. 1, 1951.

PHILADELPHIA FRESH MEATS

(Tuesday, Oct. 14)

WESTERN DRESSED

BEEF (STEER):	
Prime, 600-800	\$56.00@57.00
Choice, 600-800	54.00@56.00
Good, 600-800	53.00@54.00
Good, 500-700	47.00@51.00
Commercial, all wts.	38.00@42.00

COW:	
Commercial, all wts.	33.00@36.00
Utility, all wts.	31.00@33.00

VEAL (SKIN-OFF):	
Prime, 80-150	52.00@60.00
Choice, 80-150	50.00@58.00
Good, 50-80	42.00@48.00
Good, 80-150	45.00@54.00
Commercial, all wts.	35.00@42.00

CALF (SKIN-OFF):	
Prime, 200/down	None
Choice, 200/down	42.00@47.00
Good, 200/down	38.00@42.00
Commercial, all wts.	32.00@36.00

SPRING LAMB:	
Prime, 50/down	58.00@62.00
Choice, 50/down	58.00@62.00
Good, all wts.	54.00@57.00

MUTTON (EWE):	
Choice, 70/down	20.00@22.00
Good, 70/down	18.00@20.00

PORK CUTS—CHOICE LOINS:	
(Bladeless included) 12/down	52.00@55.00
(Bladeless included) 12-16	52.00@55.00
(Bladeless included) 16-20	47.00@50.00

BUTTS, BOSTON STYLE, 4-8	40.00@42.00
SPARERIBS, 3 lbs. down	44.00@46.00

REGULAR PICNICS, 4-8	None
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Murray H. Watkins

Wallace S. Potts

WATKINS & POTTS

LIVESTOCK BUYERS

Phone: Upton 5-1621



Phone: Upton 5-1622

NATIONAL STOCK YARDS, ILL.

August Livestock Cost Packers Less Than in 1951

Packers operating under federal inspection during August bought all classes of livestock at prices substantially lower than those paid in the corresponding month of 1951.

Average cost of cattle in August at \$25.93 was 88 per cent of 1951; calves at \$25.48 were 19 per cent under 1951; hogs at \$20.75 had 99 per cent of last year's value, and sheep and lambs averaging \$23.16 cost 16 per cent less than in the preceding year.

The 1,135,000 cattle, 426,000 calves, 3,592,000 hogs and 1,020,000 sheep and lambs slaughtered under federal inspection in August had dressed yields:

	Aug., 1952 Thousand lbs.	Aug., 1951 Thousand lbs.
Beef	608,671	558,057
Veal	60,774	59,101
Pork (carcass wt.)	681,587	831,556
Lamb and mutton	43,880	39,369
Total	1,394,912	1,488,082
Pork, excl. lard	506,990	614,815
Lard prod.	127,696	158,700
Rendered pork fat	7,672	8,575

Average live weights compared:

	Aug., 1952 lbs.	Aug., 1951 lbs.
All cattle	974.1	961.7
Steers	1,016.4	996.6
Heifers	821.4	834.4
Cows	946.6	953.9
Calves	258.2	249.5
Hogs	254.0	261.7
Sheep and lambs	258.2	249.5

Dressed yields compared:

	Aug., 1952 Per cwt. live	Aug., 1951 Per cwt. live
Cattle	55.3	54.8
Calves	55.4	56.3
Hogs	74.9	75.2
Sheep and lambs	46.6	47.1
Lard per 100 lbs.	14.0	14.4
Lard per animal	35.6	37.6

Average dressed weights compared:

	Aug., 1952 lbs.	Aug., 1951 lbs.
Cattle	538.7	527.0
Calves	143.0	140.5
Hogs	190.2	196.8
Sheep and lambs	43.3	44.6

Chicago Feeder Show Lists 100 Cars in Early Count

Over 100 carloads of cattle from seven states have been entered for the Chicago Feeder Cattle Show and Sale at the Chicago Union Stock Yards October 30 and 31, two weeks in advance of the final closing date for entries, October 24.

A majority of the early entries are coming from Montana ranches, the management reports. Other states from which cattle are listed in the early tally are New Mexico, North Dakota, Colorado, Illinois, Kansas, and Nebraska.

The Chicago show is the largest event of its kind in the country. A total of \$5,600 will be awarded to prize winning lots.

LIVESTOCK CAR LOADINGS

A total of 13,224 cars were loaded with livestock during the week ended September 27, 1952, according to the American Association of Railroads. This was a decrease of 3,950 cars from the same week in 1951 and 2,370 less than during the same week of 1950.

HOGS FURNISHED SINGLE DECK OR TRAINLOAD

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LIVESTOCK MARKETS

Weekly Review

September Cattle, Sheep Slaughter Biggest For Year

Slaughter of livestock under federal inspection during September showed increases for all species, but nine-month totals indicated that hog slaughter was gradually losing ground to the volume of such operations last year, according to a USDA report.

Supplies of beef continued large as producers moved an increasingly larger number of animals to market while restocking their feedlots with fresh arrivals off the western plains. Cattle slaughter of 1,214,526 animals was the largest for any month so far this year, and decidedly more than the September kill of 956,381 head a year ago.

The year's record 496,189 head of calves which were slaughtered in commercial plants during the month indicated that a larger percentage of the year's calf crop are headed for slaughter than in herd-building. August calf slaughter numbered 426,100 head, and the September, 1951 kill, 373,463. Western range calves accounted to a large extent for the month's big kill.

The gradual increase in flow of new crop hogs to market told to a considerable degree in the larger slaughter of hogs the past month. Packers slaughtered a total of 4,290,433 hogs during September for an appreciable increase over August operations of 3,592,147 animals liquidated. However, this remained below the 4,398,150 head killed last year. Adequate supplies of good quality feed corn were said to be factors tending to limit the rate of early flow of all hogs to market.

Sheep and lamb slaughter of 1,243,135 head represented the third month of the year that the ovine kill has passed the million mark. It was also a good deal bigger than the August kill which numbered 1,092,816 head, and sharply more than the 827,065 slaugh-

ter reported for September, 1951.

Nine-month totals compared, showed an aggregate of 9,371,459 head of cattle

FEDERALLY INSPECTED SLAUGHTER

CATTLE	
	1952
January	1,096,000
February	985,433
March	927,471
April	938,363
May	1,008,966
June	985,516
July	1,100,057
August	1,134,832
September	1,214,526
October	1,189,936
November	1,122,231
December	997,579

CALVES	
	1952
January	382,000
February	343,188
March	396,990
April	405,485
May	387,645
June	392,269
July	430,042
August	426,100
September	496,189
October	469,587
November	457,292
December	344,380

HOGS	
	1952
January	6,835,000
February	5,778,840
March	5,776,319
April	5,281,099
May	4,482,337
June	4,259,011
July	3,941,392
August	3,592,147
September	4,290,433
October	5,650,635
November	5,800,802
December	6,911,901

SHEEP AND LAMBS	
	1952
January	1,042,000
February	969,892
March	971,477
April	940,866
May	939,291
June	925,646
July	908,080
August	1,092,816
September	1,243,135
October	1,084,250
November	922,091
December	800,537

JANUARY-SEPTEMBER TOTALS	
	1952
Cattle	9,371,459
Calves	3,659,735
Hogs	43,936,123
Sheep	8,980,467

converted to meat this year against 8,619,218 over the same period, last year. The total calf slaughter of 3,659,735 tended to indicate that the final year's kill will equal, if not pass last year's slaughter, which for the nine months amounted to 3,684,111 in 1951. Hog slaughter numbered 43,936,123 against 43,961,159 last year. Sheep and lamb slaughter totaled 8,980,467 against 7,239,816 in 1951.

SOUTHEASTERN KILL

Animals slaughtered in Alabama, Florida and Georgia during August 1952, with comparison as reported by USDA:

Cattle		Calves	
	1952	1951	1952
Ala.	15,000	20,000	5,100
Fla.	20,000	13,800	5,100
Ga.	24,000	33,000	10,300
Aug. Total	59,000	66,800	20,500
July Total	52,000	...	19,800

Hogs		Sheep	
	1952	1951	1952
Ala.	45,000	40,000	100
Fla.	44,000	10,500	0
Ga.	97,000	95,000	100
Aug. Total	186,000	145,500	200
July Total	159,000	...	300

NOTE: The above table includes slaughter in federally inspected plants and in other wholesale and retail plants, but excludes farm slaughter. The data are collected by the Bureau of Animal Industry, the Livestock Branch of the Production and Marketing Administration and the Bureau of Agricultural Economics.

MEAT AND LARD PRODUCTION

Meat and lard production in the United States during August, with comparisons, as reported by the U.S.D.A.¹

Month and period	Beef	Veal	Pork ²	Lamb & mutton	Total meat ²	Lard ³
Aug., 1952	795	101	637	49	1,582	153
July, 1952	786	94	654	43	1,577	163
Jan.-Aug., 1952	5,942	638	6,594	394	13,568	1,718
Jan.-Aug., 1951	5,596	620	6,490	326	13,032	1,641

¹Excludes farm slaughter. ²Excludes lard and rendered pork fat. ³Includes rendered pork fat.

LIVESTOCK PRICES AT 11 CANADIAN MARKETS

Average prices per cwt. paid for specific grades of steers, calves, hogs and lambs at eleven leading markets in Canada during the week ended Oct. 4, were reported to THE NATIONAL PROVISIONER by the Canadian Department of Agriculture as follows:

STOCK YARDS	GOOD STEERS	VEAL CALVES	HOGS*	LAMBS
	Up to 1000 lb.	Good and Choice	Gr. B ¹ Dressed	Gd. Handweights
Toronto	\$21.79	\$26.91	\$25.60	\$23.20
Montreal	21.00	29.55	25.60	22.65
Winnipeg	20.00	25.50	24.68	20.14
Calgary	20.93	21.62	23.80	20.38
Edmonton	20.15	22.50	24.60	19.50
Lethbridge	19.65	...	23.10	18.00
Pr. Albert	18.70	21.50	23.35	18.70
Moose Jaw	...	18.80	23.60	20.00
Saskatoon	21.50	23.50	23.60	19.10
Regina	19.50	22.70	23.60	19.55
Vancouver	20.50	20.75

*Dominion Government premiums not included.

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Important Markets!

CINCINNATI, OHIO
DAYTON, OHIO
DETROIT, MICH.
FT. WAYNE, IND.
INDIANAPOLIS, IND.
JACKSON, MISS.
JONESBORO, ARK.
LAFAYETTE, IND.
LOUISVILLE, KY.
MONTGOMERY, ALA.
NASHVILLE, TENN.
OMAHA, NEBRASKA
SIOUX CITY, IOWA
SIOUX FALLS, S.D.

LIVESTOCK PRICES AT LEADING MARKETS

Livestock prices at five western markets on Tuesday, October 14, were reported by the Production and Marketing Administration as follows:

St. L. N.S. Yds. Chicago Kansas City Omaha St. Paul

HOGS (Includes Bulk of Sales):

BARROWS & GILTS:

Choice:	120-140 lbs.	140-160 lbs.	160-180 lbs.	180-200 lbs.	200-220 lbs.	220-240 lbs.	240-270 lbs.	270-300 lbs.	300-330 lbs.	330-360 lbs.
St. L.	\$14.25-16.50	\$16.50-18.75	\$18.75-21.00	\$21.00-23.25	\$23.25-25.50	\$25.50-27.75	\$27.75-30.00	\$30.00-32.25	\$32.25-34.50	\$34.50-36.75
Chi.	\$14.25-16.50	\$16.50-18.75	\$18.75-21.00	\$21.00-23.25	\$23.25-25.50	\$25.50-27.75	\$27.75-30.00	\$30.00-32.25	\$32.25-34.50	\$34.50-36.75
Kan.	\$14.25-16.50	\$16.50-18.75	\$18.75-21.00	\$21.00-23.25	\$23.25-25.50	\$25.50-27.75	\$27.75-30.00	\$30.00-32.25	\$32.25-34.50	\$34.50-36.75
Omaha	\$14.25-16.50	\$16.50-18.75	\$18.75-21.00	\$21.00-23.25	\$23.25-25.50	\$25.50-27.75	\$27.75-30.00	\$30.00-32.25	\$32.25-34.50	\$34.50-36.75
St. Paul	\$14.25-16.50	\$16.50-18.75	\$18.75-21.00	\$21.00-23.25	\$23.25-25.50	\$25.50-27.75	\$27.75-30.00	\$30.00-32.25	\$32.25-34.50	\$34.50-36.75

Medium:

100-220 lbs.	\$17.00-19.00	\$17.00-18.50	\$15.00-18.50	\$17.50-18.00
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ROWS:

Choice:	270-300 lbs.	300-330 lbs.	330-360 lbs.	360-400 lbs.	400-450 lbs.	450-550 lbs.
St. L.	\$18.25-18.50	\$18.25-18.75	\$17.50-18.00	\$17.25-18.25	\$17.25-18.25	\$17.00-18.00
Chi.	\$18.25-18.50	\$18.25-18.75	\$17.50-18.00	\$17.25-18.25	\$17.25-18.25	\$17.00-18.00
Kan.	\$18.25-18.50	\$18.25-18.75	\$17.50-18.00	\$17.25-18.25	\$17.25-18.25	\$17.00-18.00
Omaha	\$18.25-18.50	\$18.25-18.75	\$17.50-18.00	\$17.25-18.25	\$17.25-18.25	\$17.00-18.00
St. Paul	\$18.25-18.50	\$18.25-18.75	\$17.50-18.00	\$17.25-18.25	\$17.25-18.25	\$17.00-18.00

Medium:

250-500 lbs.	\$14.75-18.00	\$15.00-17.50	\$14.50-17.75
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SLAUGHTER CATTLE & CALVES:

STEERS:

Prime:	700-900 lbs.	900-1100 lbs.	1100-1300 lbs.	1300-1500 lbs.
St. L.	\$32.25-34.50	\$34.50-35.00	\$35.00-34.75	\$32.25-34.25
Chi.	\$32.25-34.50	\$34.50-35.00	\$35.00-34.75	\$32.25-34.25
Kan.	\$32.25-34.50	\$34.50-35.00	\$35.00-34.75	\$32.25-34.25
Omaha	\$32.25-34.50	\$34.50-35.00	\$35.00-34.75	\$32.25-34.25
St. Paul	\$32.25-34.50	\$34.50-35.00	\$35.00-34.75	\$32.25-34.25

Choice:

700-900 lbs.	\$29.00-33.50	\$30.50-34.75	\$29.50-33.50	\$29.25-33.75	\$30.50-33.50
900-1100 lbs.	\$29.00-33.50	\$30.50-34.75	\$29.50-33.50	\$29.25-33.75	\$30.50-33.50
1100-1300 lbs.	\$29.25-33.50	\$30.00-34.75	\$29.00-34.00	\$29.00-33.75	\$30.50-33.50
1300-1500 lbs.	\$29.00-32.75	\$30.00-34.00	\$29.00-33.50	\$29.00-33.00	\$30.50-33.50

Good:

700-900 lbs.	\$25.00-29.50	\$26.50-30.50	\$24.50-29.50	\$25.00-29.25	\$25.00-30.50
900-1100 lbs.	\$25.00-29.50	\$26.00-30.50	\$24.25-29.25	\$25.00-29.25	\$25.00-30.50
1100-1300 lbs.	\$25.00-29.00	\$26.00-30.25	\$24.00-29.25	\$25.00-29.00	\$25.00-30.50

Commercial,

all wts.	\$19.50-25.50	\$20.50-26.50	\$19.00-24.50	\$20.00-25.00	\$19.00-25.00
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Utility, all wts.

	\$16.00-19.50	\$17.50-20.50	\$14.50-19.00	\$16.00-20.00	\$16.00-19.00
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HEIFERS:

Prime:	600-800 lbs.	800-1000 lbs.
St. L.	\$33.00-34.25	\$33.25-34.25
Chi.	\$33.00-34.25	\$33.25-34.25
Kan.	\$33.00-34.25	\$33.25-34.25
Omaha	\$33.00-34.25	\$33.25-34.25
St. Paul	\$33.00-34.25	\$33.25-34.25

Choice:

600-800 lbs.	\$28.75-33.00	\$29.25-33.25	\$28.00-33.00	\$29.00-32.75	\$30.00-33.00
800-1000 lbs.	\$28.25-33.00	\$29.25-33.25	\$28.00-33.00	\$29.00-32.75	\$30.50-33.50

Good:

500-700 lbs.	\$24.25-28.75	\$25.50-29.25	\$23.00-28.00	\$24.00-29.00	\$25.00-30.00
700-900 lbs.	\$24.00-28.75	\$25.50-29.25	\$23.50-28.00	\$24.00-29.00	\$25.00-30.50

Commercial,

all wts.	\$18.00-24.25	\$19.00-25.50	\$17.50-23.50	\$17.00-24.00	\$19.00-25.00
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Utility, all wts.

	\$14.50-18.00	\$15.50-19.00	\$14.00-17.50	\$14.00-17.00	\$16.00-19.00
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COWS:

Commercial,	all wts.	15.00-17.00	16.75-18.75	15.00-17.00	15.50-17.00	16.00-17.00
Utility, all wts.	\$13.00-15.00	\$13.75-16.75	\$12.50-15.00	\$12.25-15.50	\$13.50-16.00	
Canner & cutter,	all wts.	\$10.00-13.00	\$10.25-14.00	\$9.50-12.50	\$9.00-12.25	\$10.50-13.50

BULLS (Yr. Excl.) All Weights:

Good	\$20.00-21.50	\$21.00-22.00	\$16.50-18.00	\$19.50 only
Commercial	\$17.50-19.75	\$18.00-22.00	\$16.00-17.00	\$18.50-20.00
Utility	\$15.50-17.50	\$16.00-21.00	\$14.00-16.00	\$16.00-18.00
Cutter	\$13.00-15.50	\$16.50-19.00	\$12.00-14.00	\$13.00-16.00

VEALERS, All Weights:

Choice & prime	\$30.00-36.00	\$32.00-34.00	\$25.00-28.00	\$25.00-28.00	\$26.00-32.00
Com'l & good	\$23.00-30.00	\$25.00-32.00	\$17.00-25.00	\$20.00-25.00	\$19.00-26.00

CALVES (500 Lbs. Down):

Choice & prime	\$24.00-28.00	\$23.00-30.00	\$18.00-20.00	\$20.00-25.00	\$21.00-26.00
Com'l & good	\$18.00-24.00	\$18.00-23.00	\$13.00-18.00	\$15.00-20.00	\$17.00-21.00

SHEEP & LAMBS:

LAMBS—110 Lbs. Down:	Choice & prime	\$23.50-25.00	\$24.00-25.00	\$22.00-24.50	\$24.00-25.00	\$24.00-24.50
Good & choice	\$19.50-23.50	\$20.00-24.00	\$18.00-22.00	\$22.50-24.00	\$22.50-24.00	

EWES:

Good & choice	\$5.50-6.50	\$7.00-7.50	\$5.00-6.00	\$6.00-7.00
Cull & utility	\$4.50-5.50	\$5.50-6.75	\$4.00-5.00	\$4.50-6.00

SLAUGHTER REPORTS

Special reports to THE NATIONAL PROVISIONER, showing the number of livestock slaughtered at 13 centers for the week ending Oct. 11:

CATTLE	Week Ended	Prev. Week	Cor. Week
Chicago	21,369	19,507	15,374
Kansas City	25,558	26,794	14,036
Omaha	22,250	19,013	18,231
E. St. Louis	14,744	15,108	8,704
St. Joseph	11,239	9,909	6,531
Sioux City	8,863	7,201	3,649
Wichita	2,901	2,907	4,873
New York & Jersey City	8,629	6,991	7,772
Okla. City	11,576	12,281	8,268
Cincinnati	4,612	4,626	4,325
Denver	9,708	8,908	7,877
St. Paul	12,506	12,129	10,250
Milwaukee	3,294	2,820	3,330
Total	154,248	148,194	113,220

HOGS	Week Ended	Prev. Week	Cor. Week
Chicago	37,943	35,938	42,939
Kansas City	12,138	11,041	10,272
Omaha	28,274	24,013	42,174
E. St. Louis	34,698	33,556	27,420
St. Joseph	24,721	21,630	26,071
Sioux City	21,408	17,522	23,925
Wichita	2,215	2,023	10,163
New York & Jersey City	52,579	52,500	50,942
Okla. City	10,952	10,838	13,285
Cincinnati	15,963	17,638	17,125
Denver	8,831	9,364	10,930
St. Paul	51,604	46,811	32,898
Milwaukee	6,851	5,587	6,654
Total	307,612	288,461	314,798

SHEEP	Week Ended	Prev. Week	Cor. Week
Chicago	10,022	9,401	4,276
Kansas City	8,727	9,326	4,336
Omaha	8,850	19,605	11,922
E. St. Louis	9,353	5,768	3,251
St. Joseph	11,893	11,924	9,062
Sioux City	5,376	4,020	5,194
Wichita	4	836	663
New York & Jersey City	43,678	37,957	43,211
Okla. City	4,051	5,689	3,111
Cincinnati	332	506	647
Denver	11,282	13,632	12,126
St. Paul	9,293	7,780	3,860
Milwaukee	1,358	947	972
Total	123,219	127,410	102,631

*Cattle and calves.
*Federally inspected slaughter, including directs.
*Stockyards sales for local slaughter.
*Stockyards receipts for local slaughter, including directs.

BALTIMORE LIVESTOCK

Livestock prices at Baltimore, Md., on Wednesday, Oct. 15, were as follows:

CATTLE:	
Steers, good to ch....	None rec.
Steers, com'l & gd....	\$24.50 only
Heifers, ch. & pr....	30.00@31.00
Heifers, util. & gd....	22.00@24.50
Cows, com'l	18.00@20.00
Cows, utility	15.00@18.00
Cows, canner, cutter.	8.00@13.00
Bulls, util., com'l....	20.00@20.50
Bulls, can., cut.	15.40@17.50
VEALERS:	
Choice & prime.....	\$32.00@37.00
Good & choice.....	25.00@32.00
Utility & com'l.....	17.00@24.00
Cull & utility	10.00@14.00

*Nominal.

NEW YORK RECEIPTS

Receipts of salable livestock at Jersey City and 41st st., New York market for week ended Oct. 11:

Cattle Calves Hogs* Sheep*	Salable	206	274	492	55
Total (incl. directs)	4,649	2,738	24,323	22,337	
Prev. week:	Salable	135	496	308	47
Total (incl. directs)	5,078	1,928	23,788	14,594	

*Including hogs at 31st street.

CHICAGO LIVESTOCK

Supplies of livestock at the Chicago Union Stockyards for current and comparative periods:

RECEIPTS	Cattle	Calves	Hogs	Sheep
Oct. 8	11,559	494	6,574	4,181
Oct. 9	2,396	433	12,652	2,321
Oct. 10	851	378	13,397	1,926
Oct. 11	503	152	4,677	3,316
Oct. 12	20,242	1,140	13,880	6,621
Oct. 13	8,000	300	12,000	4,300
Oct. 15	13,000	300	9,500	1,200

*Week so far... 41,242 1,740 35,380 12,121
Wk. ago... 39,178 1,897 33,218 13,539
Yr. ago... 22,721 1,117 42,491 7,299
2 yrs. ago... 34,307 1,053 43,242 7,822
*Including 83 cattle, 4,669 hogs and 2,548 sheep direct to packers.

SHIPMENTS	Cattle	Calves	Hogs	Sheep
Oct. 8	6,070	35	521	698
Oct. 9	2,943	48	1,138	494
Oct. 10	1,682	4	2,215	334
Oct. 11	226	...	280	538
Oct. 13	5,583	91	1,962	286
Oct. 14	4,000	...	2,000	300
Oct. 15	5,000	...	1,000	200

Week so far... 14,593 91 4,962 796
Wk. ago... 15,573 280 4,256 1,235
Yr. ago... 9,830 127 3,064 490
2 yrs. ago... 34,025 258 4,141 318

OCTOBER RECEIPTS			
	1952	1951	
Cattle	100,076	67,511	
Calves	5,797	3,788	
Hogs	139,693	158,121	
Sheep	45,094	26,700	

PACKERS' PURCHASES

Purchases of livestock by packers at principal centers for the week ending Saturday, October 11, 1952, as reported to The National Provisioner:

CHICAGO

Armour, 3,565 hogs; Swift, 86 hogs; Wilson, 3,574 hogs; Agar, 11,392 hogs; Shippers, 7,889 hogs; and Others, 18,726 hogs.

Total: 21,369 cattle; 1,721 calves; 45,232 hogs; and 10,022 sheep.

KANSAS CITY

	Cattle	Calves	Hogs	Sheep
Armour	3,594	1,896	2,690	3,247
Swift	4,406	3,334	3,816	3,385
Wilson	1,052	99	3,526	...
Butchers	4,898	...	548	4
Others	4,279	...	1,808	2,091
Total	20,229	5,329	12,188	8,727

OMAHA

	Cattle	Calves	Hogs	Sheep
Armour	5,562	6,704	3,965	...
Cudahy	...	737	...	...
Swift	5,827	6,506	4,018	...
Wilson	2,441	5,848	1,147	...
Cornhusker	653	...	...	...
Neb. Beef	519	...	...	...
Engle	87	...	...	...
Gr. Omaha	372	...	...	...
Hoffman	61	...	...	...
Rothschild	453	...	...	...
Roth	1,313	...	...	...
King	1,381	...	...	...
Merchants	131	...	...	...
Midwest	113	...	...	...
Omaha	452	...	...	...
Union	483	...	...	...
Others	...	12,144	...	...
Total	19,848	31,939	9,130	...

E. ST. LOUIS

	Cattle	Calves	Hogs	Sheep
Armour	2,312	1,381	10,403	4,322
Swift	5,524	4,376	12,235	5,031
Hunter	1,151	...	6,108	...
Hell	...	...	2,432	...
Krey	...	...	1,987	...
Laclede	...	...	778	...
Selloff	...	...	755	...
Total	8,987	5,757	34,698	9,353

ST. JOSEPH

	Cattle	Calves	Hogs	Sheep
Swift	3,793	994	13,531	6,418
Armour	3,183	498	6,118	2,202
Others	5,808	628	2,940	449
Total*	12,779	2,120	22,599	9,069

*Does not include 305 cattle, 5,072 hogs and 2,873 sheep direct to packers.

SIoux CITY

	Cattle	Calves	Hogs	Sheep
Armour	4,019	4	11,919	2,128
Cudahy	70	...	4,995	...
Swift	3,362	3	5,203	2,020
Butchers	269	1	12	...
Others	5,381	217	9,856	926
Total	16,101	225	31,985	5,074

WICHITA

	Cattle	Calves	Hogs	Sheep
Cudahy	118	...	628	4
Kansas	694	...	...	...
Dunn	...	...	...	...
Dold	95	...	1,148	...
Sunflower	13	...	61	...
Pioneer	...	...	...	...
Excel	829	...	...	...
Others	3,646	...	2,368	857
Total	5,395	...	4,205	861

OKLAHOMA CITY

	Cattle	Calves	Hogs	Sheep
Armour	3,442	818	1,324	1,089
Wilson	4,071	1,148	1,157	530
Butchers	189	2	1,287	...
Total*	7,702	1,968	3,768	1,619

*Does not include 658 cattle, 1,248 calves, 7,184 hogs and 2,432 sheep direct to packers.

LOS ANGELES

	Cattle	Calves	Hogs	Sheep
Armour	287	38	100	...
Cudahy	36	...	...	...
Swift	824	...	...	...
Wilson	...	...	...	...
Acme	800	...	...	...
Atlas	623	...	...	...
Clougherty	115	...	...	...
Coast	63	...	269	...
Bridgeford	55	10	205	...
Commercial	963	1	...	...
Gr. West	519	...	...	...
Hartman	260	...	...	...
Ideal	869	...	...	...
Others	3,228	1,204	845	...
Total	8,706	1,261	1,915	...

DENVER

	Cattle	Calves	Hogs	Sheep
Armour	1,377	110	3,242	15,727
Swift	1,457	191	1,580	9,529
Cudahy	33	...	213	...
Wilson	988	...	...	...
Others	4,872	410	3,098	770
Total	8,727	711	8,133	26,026

CINCINNATI

	Cattle	Calves	Hogs	Sheep
Gall	4	2	...	253
Kahn's	...	...	...	...
Meyer	...	...	...	...
Schlachter	117	12	...	16
Northside	...	...	...	...
Others	3,805	1,248	16,847	2,170
Total	3,926	1,298	16,847	2,439

ST. PAUL

	Cattle	Calves	Hogs	Sheep
Armour	4,012	3,121	15,714	2,723
Bartusch	1,124	...	...	...
Cudahy—Not operating at present.	...	...	...	...
Rifkin	894	44	...	...
Superior	1,020	...	...	...
Swift	5,456	3,840	35,890	6,570
Others	3,768	1,564	15,717	6,239
Total	15,454	8,569	67,321	15,532

FORT WORTH

	Cattle	Calves	Hogs	Sheep
Armour	1,227	3,125	...	...
Swift	2,804	2,909	...	...
Blue Bonnet	430	...	...	...
City	538	71	...	...
Rosenthal	395	3	...	...
Total	5,394	6,100	...	...

TOTAL PACKER PURCHASES

	Week Ended Oct. 11, 1952	Prev. Week	Cor. Week 1951
Cattle	154,817	150,685	112,642
Hogs	286,939	261,716	246,549
Sheep	97,852	102,548	73,149

LIVESTOCK RECEIPTS

Receipts at 20 markets for the week ended October 11, with comparisons, are shown in the following table:

	Cattle	Hogs	Sheep
Week to date, 1952	366,000	413,000	285,000
Previous week	356,000	416,000	249,000
Same wk. 1951	305,000	484,000	330,000
1952 to date, 1953	9,533,000	19,501,000	6,723,000
1951 to date, 1952	9,229,000	20,585,000	6,283,000

PACIFIC COAST LIVESTOCK

Receipts at leading Pacific Coast markets, week ending Oct. 9:

	Cattle	Calves	Hogs	Sheep
Los Angeles	9,700	1,675	2,125	250
N. Portland	1,865	320	1,750	1,760
S. Francisco	700	75	1,245	3,700

CORN BELT DIRECT TRADING

Des Moines, Ia., Oct. 15—Prices at the ten concentration yards and 11 packing plants in Iowa and Minnesota were:

Hogs, good to choice:

160-180 lbs.	\$14.50@17.00
180-240 lbs.	16.50@18.75
240-300 lbs.	16.75@18.75
300-360 lbs.	16.00@18.00
Sows:	
270-360 lbs.	\$16.00@17.25
440-550 lbs.	12.75@15.25

Corn belt hog receipts were reported as follows by the U. S. Department of Agriculture:

	This week estimated	Same day last wk. actual
Oct. 9	61,000	40,500
Oct. 10	44,500	49,500
Oct. 11	40,000	36,000
Oct. 12	62,500	67,500
Oct. 14	49,000	44,000
Oct. 15	45,000	48,500

MEAT SUPPLIES AT NEW YORK

(Receipts reported by the U.S.D.A., Production & Marketing Administration)

STEER AND HEIFER:	Carcasses	BEEF CURED:
Week ending Oct. 11, 1952	8,818	Week ending Oct. 11, 1952
Week previous	11,610	Week previous
Same week year ago	8,301	Same week year ago

COW:	Carcasses	PORK CURED AND SMOKED:
Week ending Oct. 11, 1952	1,499	Week ending Oct. 11, 1952
Week previous	1,146	Week previous
Same week year ago	3,054	Same week year ago

BULL:	Carcasses	LARD AND PORK FATS:
Week ending Oct. 11, 1952	666	Week ending Oct. 11, 1952
Week previous	629	Week previous
Same week year ago	713	Same week year ago

VEAL:	Carcasses	LOCAL SLAUGHTER
Week ending Oct. 11, 1952	13,515	CATTLE:
Week previous	12,465	Week ending Oct. 11, 1952
Same week year ago	11,842	Week previous

LAMB:	Carcasses	Calves:
Week ending Oct. 11, 1952	22,062	Week ending Oct. 11, 1952
Week previous	34,297	Week previous
Same week year ago	20,979	Same week year ago

MUTTON:	Carcasses	HOGS:
Week ending Oct. 11, 1952	306	Week ending Oct. 11, 1952
Week previous	330	Week previous
Same week year ago	1,249	Same week year ago

HOG AND PIG:	Carcasses	SHEEP:
Week ending Oct. 11, 1952	15,043	Week ending Oct. 11, 1952
Week previous	14,320	Week previous
Same week year ago	6,189	Same week year ago

PORK CUTS:	Carcasses	VEAL:
Week ending Oct. 11, 1952	913,395	Week ending Oct. 11, 1952
Week previous	1,540,158	Week previous
Same week year ago	1,340,822	Same week year ago

BEEF CUTS:	Carcasses	HOGS:
Week ending Oct. 11, 1952	67,409	Week ending Oct. 11, 1952
Week previous	82,748	Week previous
Same week year ago	99,768	Same week year ago

VEAL AND CALF CUTS:	Carcasses	LAMB AND MUTTON:
Week ending Oct. 11, 1952	6,278	Week ending Oct. 11, 1952
Week previous	5,770	Week previous
Same week year ago	5,056	Same week year ago

LAMB AND MUTTON CUTS:	Carcasses
Week ending Oct. 11, 1952	2,042
Week previous	2,200
Same week year ago	2,559

WEEKLY INSPECTED SLAUGHTER

Slaughter at major centers during the week ending October 11 was reported by the U. S. Department of Agriculture as follows:

City or Area	Cattle	Calves	Hogs	Sheep & Lambs
Boston, New York City Area ¹	9,673	10,309	55,861	50,556
Baltimore, Philadelphia	6,233	1,198	28,437	1,133
Cincinnati, Cleveland, Detroit, Indianapolis	14,535	5,020	90,212	11,422
Chicago Area	23,441	5,280	67,059	17,165
St. Paul-Wisconsin Area ²	22,041	22,654	119,090	13,579
St. Louis Area ³	16,769	13,785	78,066	13,232
Sioux City	6,531	22	22,319	5,125
Omaha	21,110	511	42,529	18,425
Kansas City	15,673	7,007	26,441	11,526
Iowa-S. Minnesota ⁴	22,008	4,168	208,155	32,823
Louisville, Evansville, Nashville, Memphis	9,746	11,628	42,962	...
Georgia-Alabama				

While every precaution is taken to insure accuracy, we cannot guarantee against the possibility of a change or omission in this index.

BARLIANT'S

WEEKLY SPECIALS

Write for Our Bulletin—Issued Regularly.

SEE ALSO PAGE 229, THIS ISSUE

- Sausage Equipment**
- 5041—KETTLE: Weaver Alum., jacketed, tilting type, stand, 405 pressure, 100 gal. cap. 35" dia. x 34" deep \$ 300.00
- 5001—SAUSAGE SMOKE CAGES: (SS) double trolleys, for 34" sticks 20.00
- 5002—DICER: Sterling heavy duty, model EMID, ser. 31, complete with motor 800.00
- 5075—SMOKEMAKER: Gerschel, automatic saw dust feed, water spray, 1/2 & 1/4 HP. 625.00
- 4083—BAKE OVEN: Advance, late style, 90 loaf cap, complete, excellent condition 800.00
- 5402—PATTY MAKER: Hollymatic, model 28, in very good condition 325.00
- 5433—KIND REMOVER: O'Connor, good condition 250.00
- 4371—SILENT CUTTER: Buffalo 43-B, 25 HP. 1350.00
- 4191—SILENT CUTTER: Buffalo 70-B, center dump, 8005 cap., less motor 2500.00
- 4370—GRINDER: Buffalo 66-B, heavy duty, with 15 HP. motor 875.00
- 5413—GRINDER: (2) Cleveland Klean-Cut, type E7E, 25 HP. motor 650.00
- 5384—GRINDER: Buffalo 56, 7 1/2 HP., 3 ph. 525.00
- 4062—MIXER: Buffalo 26, 20005 cap. air operated air cyl. for tilting hopper, V-belt drive, less motor 1850.00
- 5395—MIXER: Buffalo 22, 4005 cap. 3 HP., 3 ph. 525.00
- 5417—STUFFER: Albright-Nell, 2005, with 2 stuffing chucks 350.00
- 5385—STUFFER: Buffalo 54-B 125.00
- 4729—DISPENSER: Boss, 1-5 lbs., complete, like new 250.00
- 5396—BARREL WASHER: Globe, late model, never used 1850.00
- 5351—FROZEN MEAT SLICER: Kehler Eng. model 298-A guillotine type, without motor 1300.00
- Rendering**
- 5411—RENDERING EQUIPMENT: 2-A N. Cookers 5x12, 1-A N. Cracking Press, 600 ton, 1-Vacuum Pump for 600 ton press \$14,500.00
- 5422—TANK: Cooking, 500 gal. cap., drop bottom, never used 425.00
- 5345—COOKER: Boss 4x3, complete with 20 HP., new lining & blades 1675.00
- 5425—MAGNETIC SEPARATOR & RECTIFIER: Dings 2609 Separator & 2622 Rectifier, same as Anco 2609, mercury tungsten to rectify 220 V., 3 ph., 60 cy. current to 125 volt direct current at separator. 350.00
- 5427—HYDRAULIC CURB PRESS: French Oil, 450 ton cap. 2000.00
- 4881—HOG: Diamond, ser. 27110, throat 12" x 13", coupled with 25 HP., 3 ph., 60 cy., 220 V., 1200 RPM motor, extra set of knives 1400.00
- 5426—DISINTEGRATOR: Rietz, RD 12, 40 HP., with feeder & pre-breaker, good condition. 2850.00
- 5381—HASHER-WASHER: Anco, comb. Extrail, 30"x10" cyl., 10 HP. motor with starter 1600.00
- Boilers & Refrigeration Equipment**
- 5122—BOILER: Kewanee 253-3X, type B, 60" 87 HP., 1065 pressure, incl. all piping, fittings & other accessories, style LFB, gas fired, with return system \$3000.00
- 5430—COMPRESSORS (3): Frigidaire, model F.W., 620 water cooled condensers, 5 HP. motor 575.00
- 5428—AMMONIUM COMPRESSOR: Howe 6A-12, late style, V-belt drive with 30 HP. motor. Factory record, carries new guarantee 1750.00
- 5440—BLOWERS (12): Gehardt 210 B.H. cooling units, thermal expansion valves, stainless steel housing 515.00
- 5599—BOILERS (3): 525 HP., 2005 working pressure, with Todd Oil Burner, Class G-12, fully auto. plant. Full code boilers 8000.00
- Miscellaneous**
- 5084—TRACKING: 2320 ft. 5/8" x 2 1/4" track, 900 #133—2 mild stl. track hangers, 10" drop, 2005, 2 hole, with 103 #431 two throw switches, 2 #433 three throw switches, 210 Anco #438—3 hangers 10" long. Track .09 ft., hangers .45 ea., 2 throw switches \$2.25 each, 3 throw \$5.00 each \$ 200.00
- 5123—22 CASING FLUSHING TABLE: 21 1/2" w. x 6", dull stainless top, edges turned up, metal pipe legs, angle iron frame, drain at one end 125.00
- 5086—507 AIR HOIST, complete for operating paunch hopper or paunch table 500.00
- 4916—PAK-ICER: Vilter, 5 ton 24 hrs., ser. 2120521 500.00
- 4909—ELECTRIC TRANSCAL: 4005 cap. model 88-42-44, ser. 19052 275.00
- 4224—SCALE: Toledo bench, 2005, 1/2 grad., 1505 double tare bar, platform 28 1/2" x 29 1/2" x 22" long, wood flights, less motor. 650.00

DISPLAY ROOMS AND OFFICES

1401 W. Pershing Rd. (39th St.)

U. S. Yards, Chicago 9, Ill.

CLIfside 4-6900

BARLIANT & CO.

- New, Used & Rebuilt Equipment
- Liquidators and Appraisers

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Unless Specifically Instructed Otherwise, All Classified Advertisements Will Be Inserted Over a Blind Box Number.

Undisplayed; set solid. Minimum 20 words \$4.00; additional words 20c each. "Position wanted," special rate: minimum 20 words \$3.00; additional words 15c each. Count ad-

dress or box numbers as 9 words. Headlines 75c extra. Listing advertisements 75c per line. Displayed, \$8.25 per inch. Contract rates on request

CLASSIFIED ADVERTISING PAYABLE IN ADVANCE. PLEASE REMIT WITH ORDER.

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- 14—Anderson Expellers, all sizes.
1—Mech. Mfg. Co. 5' x 16 Cooker-Melter.
6—150, 350, 600, 800 gal. Dopp Seamless Kettles.
1—Davenport \$3A Dewaterer, motor driven.
1—Bone Crusher, 24" dia. drum.

We also have a large stock of 8/8, Aluminum and Copper Kettles, Storage Tanks, Filter Presses, Grinders, Silent Cutters, Stuffers, etc.

Only a partial listing.

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1951—Red Lion, used one week. Good as new. One \$1 Anderson—good. This is surplus equipment. • ROLLA C. BELT, RFD #3, MARSHVILLE, Ohio.

★ ANDERSON EXPELLERS ★

All Models. Rebuilt, guaranteed, or AS IS. PITTOCK & ASSOCIATES, Glen Riddle, Penn.

BUFFALO GRINDERS, 256, 66 and B 32, B 38 silent cutters. Also Sander Grinder complete with 3 phase motor, all in excellent condition. C. E. Dippel & Co., 126 Liberty St., New York City, N. Y.

PLANTS FOR SALE

PACKING COMPANY STOCK FOR SALE

We offer, subject to prior sale, 70% of the outstanding Common Stock and 80% of the outstanding Preferred Stock of The Sucher Packing Company of Dayton, Ohio for a total of \$500,000. Price is slightly under book value for these shares. Operations on profitable basis. Client desires to sell because of ill health.

Westhaimer & Company

(Members of The New York Stock Exchange)
326 Walnut St. Cincinnati, Ohio

Branches: Columbus, Dayton, Hamilton, Ohio and Charleston, West Virginia

J. A. BAKER Meat Packing Company. Has \$2,000,000 business each year. Good condition. Complete modern equipment. Separate abattoir. Excellent opportunity for good businessman. Write or call ALBERT BAKER, Asheville, N. C. Phone 8791. Or Mrs. Wm. Winkenwerder, Phone 22004, Asheville, N. C.

SAUSAGE FACTORY: Fully equipped, meat jobbing business. 2 leased stores and 5 apartments. Take over a going business including a valuable corner property, with 94 foot frontage on main arterial highway, Oakland, California. \$29,000 down. Owner must sell. H. Furling, 3513 MacArthur Boulevard, Oakland 19, California.

FOR QUICK SALE: Cattle and hog killing plant, well located. Supplies available. Large coolers, well built. Inspection invited. Can be turned into government inspected plant easily. Bargain Write, wire or phone Price-Davis, Inc., 307 Tuloma Building, Tulsa, Okla. Phone 3-5503.

WHOLESALE PLANT: (no slaughtering) fully equipped. 23' x 45' concrete cooler, 18' x 10' concrete freezer, track rails, Diesel generator, etc. Adjoining retail market optional. 4 years old. SELL OR LEASE. FAIRWAY MEATS, 12625 West Dixie Highway, North Miami, Florida.

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A PRACTICAL PRIVATE TRADE SCHOOL PENNSYLVANIA STATE LICENSED

Students will learn to make 3 different types of sausage daily in batches of 100 pounds net. New and old fashioned sausages from all countries including Kosher style. We also teach latest methods of making canned and dry beef. All parts of curriculum will be repeated 3 to 4 times. Full course 22 weeks. Split course 5 weeks. For full information write or wire

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Write for details on a specific problem.

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Chicago 13, Illinois

WAXED MEAT BOARDS

for

Sliced Bacon, Frankfurters, Sausage, Luncheon Meat, etc., cut to size. Immediate delivery. Competitive prices. Samples cut to size gladly submitted.

BORAX PAPER PRODUCTS COMPANY

783 Cauldwell Ave. Bronx 56, New York, N. Y.

TANKAGE

We buy dry and wet rendered tankage, dried underground blood in carloads. Please submit your offerings.

AMERICAN MILL SERVICE CO., INC.

116 Portland Avenue

Minneapolis, Minn.

BROKER IN SAN FRANCISCO area with following, large retail chain jobber, hotel supply, will represent independent packer who seeks business in this area. References furnished. W-457, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

GERMAN MADE BUTCHER KNIVES

Direct from importer. Highest quality. Write for illustrated list and prices.

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SAUSAGE CASINGS ANIMAL GLANDS

Selling Agent • Order Buyer

Broker • Counsellor • Exporter • Importer

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ORIGINAL PHILADELPHIA SCRAPPLE

HAMS • BACON • LARD • DELICATESSEN



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DRY SAUSAGE • VACUUM COOKED MEATS • LARD

THE RATH PACKING CO.,

WATERLOO, IOWA

CLASSIFIED ADVERTISING

POSITION WANTED

SAUSAGE CONSULTANT

Up-to-date, with 46 years of practical and theoretical experience in the manufacture of a complete line of quality sausage, when necessary using own formulas of piquant seasoning, also hams, picnics, rolettes for smoking, canning, tenderized boiling and roasting, artificial color on all kinds of sausage not necessary. Put in new items and a real good system to make uniform quality products all year round at a minimum cost price. Straighten out any sausage trouble in a short stay, placing men where best qualified. I travel north, south, east and west to small or large plants. Best references on hand.

W-438, THE NATIONAL PROVISIONER
15 West Huron St. Chicago 10, Ill.

MANAGER or SUPERVISOR: Thorough experience in animal feed, bone glue, hides, edible and inedible rendering (wet and dry), handling personnel, figuring yields. Steady, reliable. Any location. W-419, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

EXPERIENCED OPERATOR: With practical and outstanding knowledge of sausage and smoked meats, would like to associate with a reliable firm or person on a profit sharing plan. W-439, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

MANAGER: Fully qualified in all phases of plant operations from livestock buying through sales. 27 years' experience. W-428, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

SAUSAGE MAKER: Desires position with growing concern. Have both federal and state experience. W-429, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

BOLOGNA MAKER and PICKLER with 30 years' experience in both kosher and semi-kosher products is looking for position. W-430, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

HOG or BEEF CASING man with all around experience wants position in large or small plant. Willing to go anywhere. W-406, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

HELP WANTED

ATTENTION SAUSAGE MAKER

To take full charge of Sausage operation in modern, Government-inspected food processing plant. This company has just completed an ultra-modern Sausage manufacturing addition to its meat canning plant and offers an excellent paying position to properly qualified person. We desire person with background in Sausage manufacturing, handling of personnel, figuring tests and costs, plus desire to advance in progressive organization. This is an independently owned company with a top-notch young organization distributing its products throughout the United States. Plant is located in small town with finest living conditions, including fishing, golf, and hunting; located close to Kansas City, Missouri.

In replying give full details of past experience, how long connected with meat industry, age, and any other information that will help us to decide on your application. All information will be confidential. Box W-431, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

HELP WANTED

SALESMAN WANTED

ESTABLISHED MANUFACTURER OF CURING AND SEASONING MATERIALS HAS OPENING FOR A SALESMAN IN WELL DEVELOPED EASTERN TERRITORY.

Salary, commission and travelling expenses basis.

Reply to Box W-432

THE NATIONAL PROVISIONER

15 W. Huron St., Chicago 10, Ill.

giving full details of qualifications and previous experience. All applications held in strict confidence.

GENERAL MANAGER

Family owned quality packinghouse in upstate New York, specializing in sausage products, desires experienced general manager. Good salary plus percentage of profits for capable aggressive executive to handle all phases of business, including production, accounting, sales and purchasing. Submit detailed personal history statement, including education, experience, present job duties and salary, references and age. Excellent opportunity.

W-420, THE NATIONAL PROVISIONER
15 W. Huron St. Chicago 10, Ill.

WORKING

HOG CASING FORMAN

Wanted for modern northeastern Ohio packing plant.

SUGARDALE PROVISION COMPANY

1018 McKinley Ave., S.W. Canton, Ohio

GOOD OPPORTUNITY FOR RIGHT MAN

Middlewest packer with over 500 employees, desires services of young man, preferably 25 to 35 years of age; experienced in packing house personnel work, payroll and costs. Replies held in strict confidence. Write full particulars.

W-422, THE NATIONAL PROVISIONER
15 W. Huron St. Chicago 10, Ill.

SALESMAN: For well known prepared sausage seasonings. Arkansas, Oklahoma, southern Missouri and Illinois, northern Louisiana. Liberal weekly drawing account against commissions. Packinghouse or allied line sales experience preferred. Give age, experience and qualifications in first letter. All correspondence strictly confidential. Write Box W-347, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

PLANT SUPERINTENDENT: Dog food manufacturer. Must be experienced, know refrigeration, able to handle union shop and get production. Salary plus bonus. Wonderful opportunity for right man. W-423, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

FOREMAN: For curing cellar. Must be steady and sober. W-435, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

HELP WANTED

PLANT SUPERINTENDENT wanted for medium sized packing house located in the south and producing over 50,000 sausage items weekly. Necessary you furnish complete record of employment for past 10 years in your first reply. Unusual opening for man who can qualify. Write Box W-414, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

SALESMAN WANTED to sell distributors our complete line of consumer and institutional packages of frozen steaks with unlimited possibilities. W-433, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

A CONCERN, NOT A MEAT PACKER, wants man to sell car lots of cheese, frozen eggs and poultry, from New York office. W-425, THE NATIONAL PROVISIONER, 18 East 41st St., New York 17, N.Y.

TIME STUDY ENGINEER capable of setting work standards. Mid-western location. W-426, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

SAUSAGE MAKER: Top pay. Experienced. Active. Must know business. LATE PACKING COMPANY, Thurmont, Maryland, Phone 4551.

CHICAGO BROKER: Has opening for assistant in carload beef sales department. Replies treated confidentially. W-434, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

FOREMAN: Experienced, for shipping room (nights), wanted by prominent meat packinghouse. Good salary. W-440, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

EXPERIENCED FOREMAN: For smoked meat department, wanted by prominent meat packinghouse. Good salary. W-441, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

SALESMAN: (Commission) To sell full line of machinery equipment and supplies for slaughterers, packers and locker plants. Write the C. SCHMIDT CO., 1712 John Street, Cincinnati 14, Ohio.

PLANT WANTED

WILL BUY OR LEASE: 1 cooker rendering plant. Grease or meat scraps route or dead animal plant in operation. Must be in dry, warm climate. PW-427, THE NATIONAL PROVISIONER, 15 W. Huron St., Chicago 10, Ill.

PLANT FOR RENT

HORSE SLAUGHTERING PLANT
For lease in Kingston, New York. Federal inspection. Fully equipped. Inexpensively convertible for cattle or calves. FR-436, THE NATIONAL PROVISIONER, 18 East 41st St., New York 17, N.Y.

EQUIPMENT WANTED

WANTED: Filter Presses, Expellers, Kettles, Grinders & Pulverizers, Screens, Cookers, Rendering Presses. EW-34, THE NATIONAL PROVISIONER, 18 East 41st St., New York 17, N.Y.



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MAIL
AND
WIRE

ANNUAL MEETING ISSUE

Contents

AN INDUSTRY RESURGENT—IF 103

POLICY MAKING

Hardenbergh Emphasizes Need for Earnings 105
Corey Says Better Public Understanding Needed 187
Packers Must Think Along New Lines 175
Teach the Retailer to Handle the Housewife Better 171
The Livestock and Meat Outlook Surveyed 165

NATIONAL POLICY ON AGRICULTURE

A Constructive Program by Senator Aiken 211
Don't Let Them Make Beef a Whipping Boy 127
Do We Want Price Ceilings and Supports? 201
Nebraska Works to Produce More Food 245

ADVANCES IN ANIMAL HUSBANDRY

Increasing Livestock Output by Disease Control 123
Raising Pigs on Synthetic Milk 130
Antibiotics and Carcass Quality 134

NEW DEVELOPMENTS ON THE OPERATING SIDE

Hogs Immobilized for Easy Slaughter 112
Sound Sanitation Program Saves Money 108
Mechanically-Refrigerated Cars Perform Well 114
Painting Out Mold 117
Eliminating Foam in Rendering 118
Machinery Lifts the Beef Lugger's Load 120
Construction of a Leakproof Floor 121

SCIENTISTS AND TECHNOLOGISTS TAKE A LOOK

Facts About Meat Color 140
Improving the Quality of Dry Rendered Lard 144
Producing Better Tallows and Greases 148
What's New in Research 158
Progress in Better Living 226

ACCOUNTING

Machinery Gets Facts to Management on Time 181
Standards and Application to Product Costs 184
Cutting Down the Red Tape 241

NATIONAL AFFAIRS

Stop Spending and Governmental Encroachment 192
Less Danger of Another World War 218
Place American Interests First 207

1952-53 OFFICERS OF THE INSTITUTE 237

REVIEW OF NEW EQUIPMENT EXHIBITED 270

SPECIAL FEATURES

Awards to the 50-year Veterans 260
Annual Banquet 244, 246
Pages of Pictures 195, 212, 243,
249, 251, 252, 253, 254, 255, 256, 257, 258, 265, 266, 267, 269
Ladies Activities 248

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TRUCKS

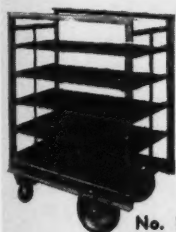
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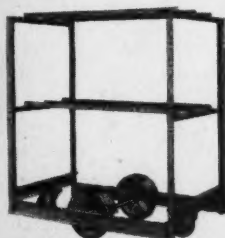
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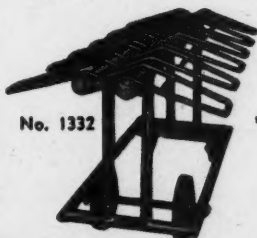
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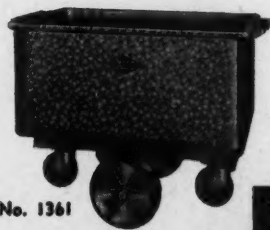
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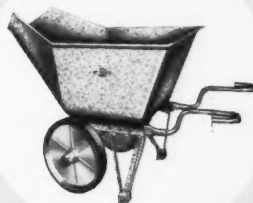


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12. **REPLACEABLE SHOES**—are galvanized cast iron.

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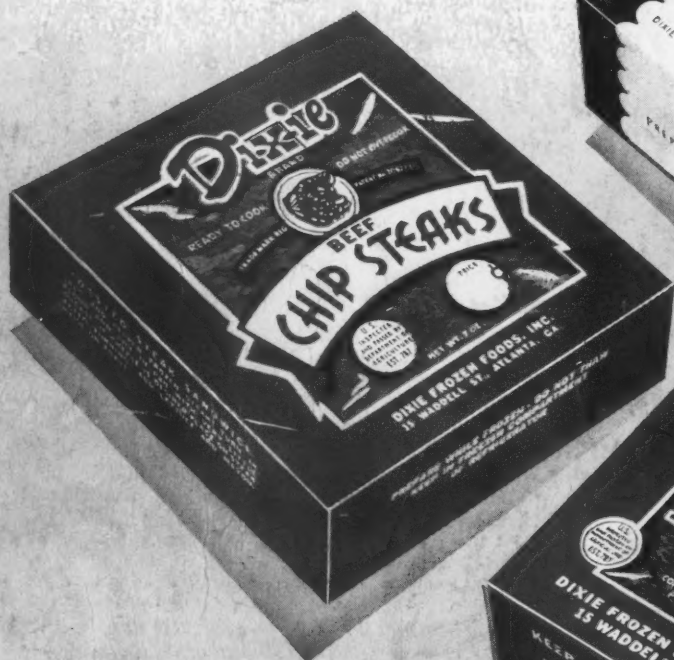
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